Environmental Performance in Swedish Municipalities

Challenging diversity and triggers for change

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Abstract

The purpose of this research was to examine how non-mandatory municipal environmental work is carried out. What drives certain municipalities to be more active than others, and what works as barriers? It was also of interest to understand if the mandatory work could influence, trigger or hinder other environmental goals and ideas. Further, the research looked to identify some characteristics that differentiate an active municipality from a passive one in order to understand what stops all municipalities from being equally active.

These general questions were condensed into two research questions:

What are the triggering factors for the enabling of active municipality environmental work?
What are the barriers when it comes to active municipality environmental work?

The questions were researched for interconnectivity as well as for individual answers.

The research identified a number of triggering factors that can enable active environmental work within municipalities. The foremost factors are prime movers, influential persons whether they are politicians, civil servants or any other stakeholders, and the organizations in which they operate. Other strong triggers include interest groups and their influence and the threat of bad will.

A number of barriers were also identified, such as economy, organizational structure and negative stakeholder pressure.

It also turned out that the triggers and barriers were indeed interconnected and somewhat dependent on one another. One such instance was LIP money which has bridged the gap between the need for municipalities to be environmentally active and the lack of economy or organizational will to free funds for the needed work. The LIP money made it hard for decision makers to refuse projects in the beginning since they actually brought funds into the system and the municipality could bring working hours into the deal.

Executive Summary

The public sector is often the largest employer in the local municipality and that inevitably means that they have environmental impacts. According to research done in the private sector, large companies more often than not have EMS and evolved environmental thinking. If municipalities behaved as the private sector they should be advanced in their environmental work since they are typically a large company. The question is if the same market driven factors, as the private sector, govern the public sector? There are reasons to think that the triggers for active environmental work in municipalities and within the public sector are somewhat different than for the private sector. In benchmarking studies done on municipal environmental work there are clear differences between the municipalities environmental work being carried out.

The general "body of knowledge" has discussed some aspects that could influence or be triggering factors for the public sectors ability to be active and going beyond compliance in their environmental work. The hypothesis is that there are a number of triggering factors that enable municipalities to change from being a passive environmental community to being an active environmental community.

What drives certain municipality to be more active than others? Is it the same factors that control the private sector? What marketing advantages could a municipality hope to gain by being environmentally active? How would you measure this advantage, or what are some identifying characteristics? If there is a clear advantage, what stops all municipalities from being active?

All these questions can be condensed to: What are the triggers and barriers to active environmental work for municipalities?

In order to answer the questions a suitable frame of reference needed to be created. It was of importance to look to prior work within the field and also look to possible other literature that could be of interest when it came to municipal work or changing behavior. Several different theories from different fields had to be examined in order to get a better picture of what possible triggers and barriers could affect a municipality.

The theoretical ideas needed to be verified and cross-verified. This work was carried out through surveys, personal interviews, e-mail statements and peer-to-peer discussions in order to validate findings along the way. During the progress of the research the findings were continuously analyzed and reviewed in order to narrow down questions and statements to answer the posted questions.

In the end the research did produce answers to some possible triggers and barriers.
The foremost triggers are prime movers, influential persons weather they be politicians, civil servants or any other stakeholder as well as the organization in which they operate. Another strong trigger are interest groups and their influence as well as the threat of bad will. A number of barriers are also identified such as economy, organizational structure as well as stakeholder pressure.

The work also reviled that that triggers and barriers are indeed interconnected and somewhat dependent on one and other. Further the work indicated that some issues were more important than others when it came to enabling municipalities to be active with their environmental work. The organizational structure and prime movers were identified as being key ingredients, but outside of this fact the structure of the organization was not research neither was the source or driving factors for the prime movers.

It would seam appropriate to do further research on what kind of organization would foster active work and how to come about this change as well as incorporating how the prime movers would fit into this.

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1. Introduction

1.1 Background

Until approximately forty years ago the Industry has been about end of pipe production. What do we get at the end of the production run? No real mind was paid to environmental aspects or the fact that a lot of valuable material might be lost as waste during the production of any given product. In the mid-fifties scientist started to study pollution as a result of what came out at the end of the pipe (S.Erkman, 1997: 1). In the early sixties we saw one of the first contentious efforts to raise public opinion on air, water and wildlife issues with the publishing of "Silent Spring" according to Miller (Miller, 2002: 33). In the seventies we saw the first writing of Industrial Ecology, in 1972 the Stockholm convention on human environment, lead to UNEP being chartered (Miller, 2002: 37). This was when the environmental agenda got its first worldwide acknowledgement. We saw the evolvement of "non waste" production thinking (Erkman, 1997: 3), and the beginning of the industrial ecology thinking even it did not really take off until the last decade; when we have seen a tremendous increase in environmental awareness not only when it comes to actual physical environment, but even more when it comes to working environment. Health, safety and ethical issues (HSE) for employees are very important, as is social responsibility as a concept for the company. The biggest manifestation of this was the Rio Summit in 1992 when a series of different environmental goals where agreed upon, and industrial ecology could be one of the paths to find an economical way of achieving sustainability in business and communities alike. Miller, in his book *Living in the environment* claims that the 1990 where mostly a disappointing time for environmentalists, and that might be true in America, but overall there where some major steps in environmental thinking evolving worldwide.

Today there are numerous examples of companies inside and outside of Sweden that have taken their environmental work beyond compliance in accordance to both local and national laws and regulations. Companies, or at least some companies, understood early on that it could be beneficial to lead the way when it came to environmental work and later on also with social and ethical work. As an example of companies working with economic, environmental and HSE reporting, are such companies as ABB, Ericsson, ITT Flygt, Novo Nordisk and Volvo. These companies all report on a triple bottom line, in accordance to their belief that it is of paramount importance for their business and their ability to be competitive on the international market arena. They no longer consider corporate social responsibility to be a source of cost, but rather an important if not essential part of their business strategy.

There are a number of triggers that encourage companies to change their corporate environmental thinking. The biggest one, according to Arnfalk and Thidell (1992) is legislative pressure. The study also shows that company reputation, as well as morality plays an important role in environmental work. In a later study, by Heidenmark (1999), which is based on Arnfalk and Thidell, the biggest factor for change is the market and/or customer demands. Other factors that are mentioned as a trigger are: knowledge that reducing waste will increase profit, a need to produce goodwill in the local or international community, a way of attracting new personnel or investors. The joint factor for the really active companies in both reports is

that they are almost always large employers and that they have at least one prime mover[1] that is also empowered to achieve change (Arnfalk & Thidell; Heidenmark).

The public sector was, and still is, often the largest employer in the local municipality and that inevitably means that they also have environmental impacts. If municipalities behaved as the private sector they should be advanced in their environmental work since they are the biggest employers and hence then a "big" company. But since the same market driven factors, as the private sector, normally do not govern the public sector there are reasons to think that the triggers for active environmental work in municipalities and within the public sector are somewhat different than for the private sector.

The general "body of knowledge" [2] has discussed some aspects that could influence or be triggering factors for the public sectors ability to be active and going beyond compliance in their environmental work. Being active might help attract new employees even though the salary are lower than within the private sector, by being active a company saves on internal resources something that is always needed for a company that has a fixed budget regardless of economy. The general level of education within separate municipalities is another mentioned factor, and the number of inhabitants in the municipality could affect their ability to be active in their environmental work. There have been more discussions around the actual organization of the public sector within the municipalities as a triggering factor for change, even more so than passionate and motivated employees. There are also indications that prime movers as well as political will might be the one enabling triggering factors.

In a report published by the [Expert group on public economy][3] called [To evaluate your self][4] a number of issues around the municipalities work are raised. The biggest problems according to this report was the fact that the environmental supervision varies tremendously between municipalities, some local politicians want the municipalities environmental inspectors to "go easy" on local businesses, and there are conflicts of loyalty for the environmental inspectors between following the law and keeping in good graces with their employer i.e. the local municipality. There is also an other report from the Swedish association of scientists[5] that support the notion that there is a clear situation of recusation[6] when it comes to the environmental inspectors situation of inspecting there own employer as well as a clear discrepancy in the quality of the work in-between different municipalities. Both these reports focus on the fact that the mandatory surveillance work of municipalities has some faults to it. This is something that is being addressed in a regulatory change by the Swedish government during the fall of 2003 (Etik & Miljö: 2).

It would seem that there are a number of factors or combination of factors that trigger environmental change and active thinking within the municipality. It would be beneficial to understand what drives some municipalities to be more active than others, what are the

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[1] Prime mover is what in Swedish would be called an "Eld skäl". This is a person who really feels devoted to a cause and therefore is willing to go above and beyond what would could be considered as normal behavior be that positive or negative.

[2] With body of knowledge the author means journalists, professors and general discussions being carried out in media and education.

[3] Expertgruppen för studier i offentlig ekonomi (ESO), translated by author.

[4] Att granska sig själv, translated by author.

[5] "Naturvetareförbundet", translated on their Web page.

[6] The intended English translation is for the Swedish word of Jäv, but was found in a dictionary from 1942, but not in later publications.

triggers or barriers to environmental work. What actually signifies an active municipality compared to a passive one? In understanding this it would be easier to be able to evaluate what steps need to be taken within a municipality that wanted to become an active community.

1.2 Hypothesis

The hypothesis for this research is that there are a number of triggering factors that enable municipalities to change from being a passive environmental community to being an active environmental community. These triggers are probably different from the ones you would normally see in a commercial market driven company. Activeness in order to recruit high-end employees, or in order to lower community expenditures could be two options. The general level of education of the populous and the density of the population could also be influential factors. The structure of the environmental organization as well as strong influential groups have also been mentioned as being possible triggers for change within the public sector. Finally, the two biggest factors mentioned as being important to municipal environmental work are prime movers[1] and strong political will. It might also be a combination of these factors that trigger the active environmental work within municipalities.

1.3 Purpose

The purpose of this research, is to look to the environmental work carried out outside of the mandatory work, also as mentioned before it is of interest to understand if this work could influence, trigger or hinder other environmental goals and ideas. Henceforth all environmental work that is mandatory is labeled as such to avoid confusion.

The environmental magazine MiljöEko has done an overall study of the environmental work of all Swedish municipalities once a year since 1995 and this shows that there was and is a clear difference in-between the environmental work being conducted within the municipalities all over Sweden. On a more local level the Skanian newspaper Sydsvenskan did a three-piece article series on municipalities in southern Sweden, which showed the same discrepancy just within this small geographical area, which could indicate that environmental work has nothing to do with geographical boundaries.

The interesting question here is why there is a discrepancy between different municipalities, are there some enabling factors in some municipalities that are lacking in others or do all municipalities have the same pre-requisite and there are just different barriers that control how successful municipalities are in their environmental work?

The work done by both MiljöEko and Sydsvenskan indicate that there are similar discrepancies between the municipalities. Some of the municipalities are more environmentally active than others and hence have scored higher in the ranking of the two newspapers. There seems to be a lack of understanding of why this is the case. None of the newspapers have reflected on this issue. This leads to some questions, or areas of questions.

A. What drives certain municipality to be more active than others? In a market driven economy, that most private companies operate within this difference could be perceived to give marketing advantages as mentioned earlier, but municipalities do not operate in a field that is controlled by market competition. What are the marketing advantages for a municipality to do more than is required of them if they have no competitive advantages from this?

B. What are some identifying characteristics of an active municipality in contrast to a passive one? This could possible be measured in terms of organization, economy, inhabitant structure, prime movers and others identified enabling factors. Are there any common denominators between what is deemed an active community and a passive community?

C. What stops all communities from being active?

These general questions could possible be condensed done to two research questions:

What are the triggering factors enabling active municipality environmental work?
What are the barriers when it comes to active municipality environmental work?

It would also be interesting to know if these questions are interconnected? Could it be that an active industry is a trigger for the municipality to be environmentally correct? Could it be that the municipality simply does not want to look worse than the private companies?

1.4 Limiting factors

The research only covers five municipalities and in the bigger scope of things that is not very much, especially since they are all in the southern part of Sweden. There is a risk that they are somewhat similar in their logic and reasoning.

The municipalities where chosen based on ratings given in two separate reports. The benchmarking that was done by MiljöEko has been criticized for not considering all aspects of the environmental work performed by communities. The questions that have been used over the years in MiljöEko where analyzed by the researcher to see if he with 11 months of environmental training as well as a year and the half of working within the environmental field could find anything to point to, but nothing out of the ordinary was found. After having talked to Nils-Erik Wickman at MiljöEko at length, about the reasoning behind the complaints it seemed that all of the complaints very from municipalities that had scored poorly. It could be argued that maybe there should have been more questions in order to cover all avenues an possibilities, as in for instance the GRI report, but considering that MiljöEko claimed that they had real problems getting the municipalities to fill out just these few questions, often after two to three reminders, it would seem unlikely that they would have gotten any answers at all with more questions or essay based questions as well as having been harder to compare if not impossible. The questions that where used, nevertheless, give a good indication towards how much overall work was being done in each municipality. (A summary of the results and all the questions to MiljöEko can be found in Appendix A).

The example done by Sydsvenskan could be argued to be bad on the same principle as the MiljöEko benchmarking, and after having talked to Tove Zellman, the author, about this issue it turned out that one of the municipalities that had scored poorly had in fact complained about the benchmarking not having enough questions or rather not covering the right questions. Tove Zellman, who is a LTH graduate of Lund University, used her knowledge background in environment as well as utilizing help from MiljöEko and people at the [municipalities joint organization][7] to construct her questions. They were similar in scope and numbers to what was used by MiljöEko. The study performed by Tove Zellman was

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[7] Kommunförbundet

significant, but because of space shortage in the newspaper her material was incomplete and gave an unfinished appearance in the printed version. They did, however, point towards the same differences that could be seen in the MiljöEko benchmarking. (The questions and results of the questions from Tove Zellman's research can be seen in Appendix B)

One issue that was considered was the fact that the municipalities where in effect picked based on secondary evaluation on their environmental work and it could be argued that it would have been more valid to do a first hand evaluation based on primary data collected by the researcher. The fact that two separate benchmarking surveys where used helped to reduce this issue. On top of that the researcher also had the selected municipalities answer a longer survey in order to double-check if the ranking that had been done was somewhat accurate. (The questionnaire used for this can be seen in Appendix C)

During the interviews with the different municipalities the goal was to get selected key-persons in managerial positions. The fact of the matter is that a good variety of persons where interviewed. Environmental CEOs, Environmental coordinators, an Elected politician, people from the Building and environmental office as well as the CEO of the TF in some municipalities. This actually created a good mix of people who where all involved in the environmental work of the different municipalities as well as some of the mandatory surveillance work.

1.5 Method background

While conducting the research, a lot of time was spent trying to find prior work in the research area. There are hundreds of reports published in Sweden on public sector work. There are internal reports and external evaluations of different works that have been carried out in municipalities all over the country. It was easy to find a number of reports on what environmental projects have been tried within different municipalities. If a municipality has done, or perceive that they have done a good environmental change they often advertise this on their local web page. Unfortunately, these reports only spoke of why the work had been done in shorter passages and never in any detail of the work that was behind getting the project underway.

Related articles where scanned to find specific instances where the reason for change being initialized where discussed or if the critical success factors where mentioned. In some reports, such as, [working document for Lund's new agenda 21] there are some references being made to why they have been successful in their work but not why they have conducted the work, there are references to the national Swedish 15 environmental targets. The national environmental targets are often used as a reference to local environmental work but it does not explain drivers and barriers to successful change within Swedish municipalities since all municipalities would then have roughly the same environmental focus and achievements.

During the readings the researcher was searching for a suitable frame of reference, but even though a perfect model or theory could not be found for municipalities, the author looked to success stories within the private sector since there are large quantities of data on organizational changes, barriers to change as well as triggers to change for businesses. Why then would the researcher look to organizational change at all when the topic is municipal environmental work? The researcher has written a master thesis in Business organizational behavior that focuses on operational leeway. In light of this the researcher studied how municipalities struggle to maneuver in what they perceive is their best interest in order to understand what causes some municipalities to be more active than others in their environmental work.

It is important to point out that there is some environmental work that all Swedish municipalities have to conduct and that is called mandatory surveillance work. The local environmental office is set to control industry, local business, produce production and so forth and this also includes all of the municipalities business that comes into this area. It does not, however, cover the general cervices the municipality gives the inhabitants in the form of parks, water sources, refuge, waste, electricity and general well-being. This is the environmental work that the research will focus on, whereas the mandatory work was touched upon briefly in the research, but mostly to identify if it in anyway influences the environmental service work that is being carried out.

Since the purpose of this study was to find out why environmental work has been done and what has triggered it, it was important to understand and visualize the respondents view, this is one of the important validating marks of a qualitative study, whereas a quantitative study would typically start from an idea from the author that needed to be proven according to Alvesson and Sköldbert (1994: 10).

1.6 Working method

It would seem that a qualitative method could harbor the softer issues, which are being studied when you talk about feelings, reasoning behind why decisions have been taken, in an easier way than a quantitative study could. The figure below illustrates how the work was conducted. It is a roadmap to the authors thinking during the process of constructing the research.

First there was the issue of how literature was going to be used. Was there a model or a developed theory that the findings could be compared to? During the course of the work new theories and ideas have emerged and that is why there are diagonal arrows between literature review and revising literature and theories. The theories that were utilized were used in analyzing the municipalities, which is shown in the reflection side of the picture.

After having done an initial survey of literature that could be used for this kind of work there was the issue of picking municipalities to work with as well as respondents to interview within each municipality. After having chosen the municipalities and doing a first test of questions with respondents there was an initial reflection. The reflection was on if the municipalities had been chosen on the right basis, in this case that they did indeed behave in the manner that the two previous benchmarking articles would indicate.

After the initial screening and questions of the municipalities was done a further set of questions for interviews where constructed. A number of interviews were held on site at the municipalities and further literature was consulted in order to better grasp the answers received.

At this point the colleted material was analyzed and a further round of remarks were constructed and sent out to the municipalites to respond to. The answers to these remarks were also analyzed and reviewed together with the previously collected material.

The collected material gave insight to construct and evaluate questions that could be discussed in a peer-to-peer forum according to the Delphi method. The Delphi method forum was carried out and the final results of it where evaluated and incorporated into the final analysis.

In the end the author tried to critically review the validity of the collected data as well as to evaluate the overall relevance of all the gathered material.

Below the picture that tries to visualize this work there are more in-depth explanations to some of the steps in the work carried out.
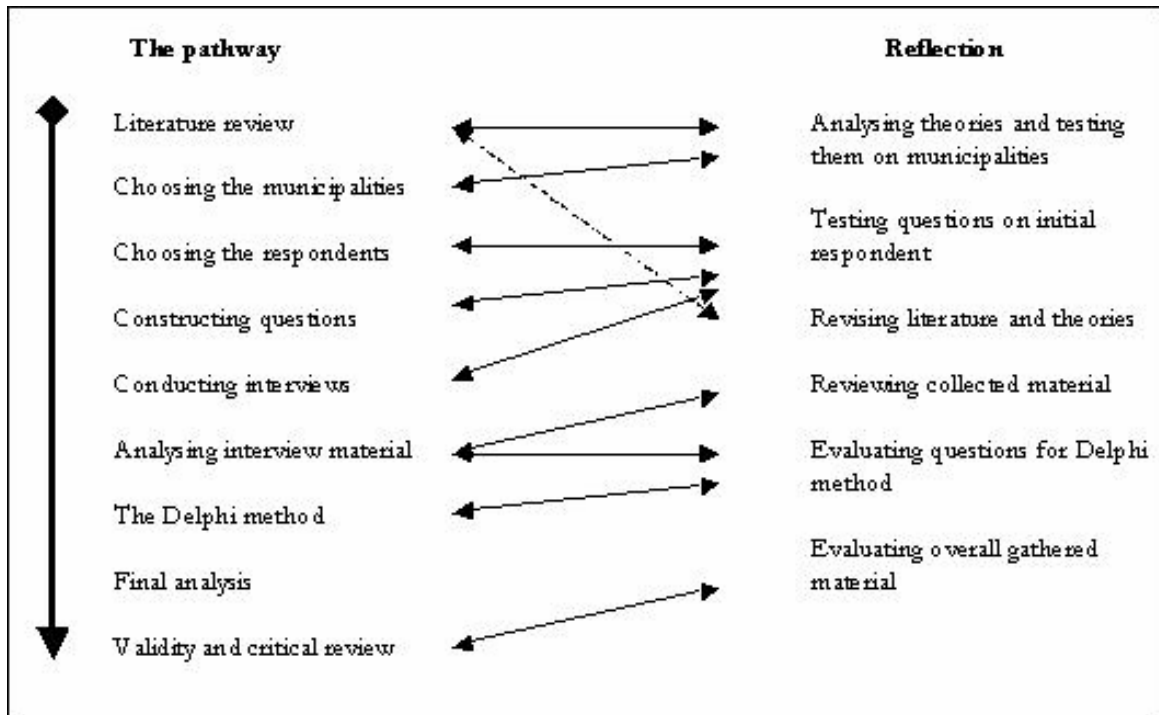
Figure 1-I How the work was carried out.

1.6.1 Choosing the municipalities

Choosing the correct method to work by gives greater value to the final result of a research paper, since it increases the possibilities to accomplish a research within the objective frame of the research. A good frame of reference is important when doing research. This was the reason why two different approaches to choosing interview subjects have been used. The author has utilized findings from both the magazine MiljöEko, and findings from a research done by Tove Zelmman, partially printed in an article series in the daily paper SydSvenskan in order to both find the five municipalities to study as well as developing open-ended questions to base the in-depth interview on.

The Swedish environmental magazine called MiljöEko, (http://www.miljo-eko.nu/) who over the past ten years has done a complete benchmarking or comparison of all the Swedish municipalities, was used to get an understanding on how widespread the discrepancy was as well as to find a good mixture of municipalities. Cost and time issues meant that only Southern Sweden could be a realistic option for municipalities to visit. By looking to the results over the past three years for Skanian municipalities, and also cross-referencing this to research done by a biology graduate and now newspaper reporter: Tove Zellman that was partially published in an article in the local newspaper called Sydsvenskan five municipalities where picked.

The five municipalities are Lund, Staffanstorp, Svedala, Kävlinge and Klippan and they are all located in a fairly close proximity to each other. They have all been rated with varying results and they have also shown a different environmental development and maturity over time. They are from three different categories of municipalities. Lund municipality represents a

bigger town, Svedala and Staffanstorp are suburban municipalities and Klippan and Kävlinge are bigger urban municipalities. This division of municipalities is taken from the MiljöEko.

The municipalities showed similar results in the benchmarking done by Zellam, with Lund and Svedala on top and Kävlinge and Staffanstorp on the bottom. Unfortunately Klippan was not interviewed in Zellman's work. Her questions and the results can be seen in appendix B.

The two benchmarking tools where only used to pick the municipalities and to assure that there was some spread in what is considered better performance and worse performance within the environmental field. The important thing for this report was to find a widespread field of municipalities and not to use the actual rating as a discussion platform. This work was based on in-depth interviews with key environmental people in each municipality, as well as could be managed over the summer months in Sweden.

1.6.2 Selecting persons to interview

The purpose of the study was to get answers and understanding of the questions posted in 1.3 it was important to interview persons who are high up in the organization, in order to ensure that they have the actual knowledge as to why the work is being carried out. The goal was to interview the head environmental officer or the head of the technical department at the municipality since their departments are often responsible of carrying out much of the environmental work. If none of these could be obtained the next closest in line will was contacted.

To contact the key individuals different methods had to be used. Primarily phone and e-mail was utilized. It is interesting to notice that none of the persons that were actually contacted refused to partake in the study.

1.6.3 Procedures around interviews

Given the time limit and the difficulty of interviewing people during the summer months in Sweden it was important to get the right kind of questions since the analytical results will be based primarily on the findings from the interviews.

Since the research regards both tangible and intangible barriers and triggers for change the questions were constructed in a way that would encourage dialogue while at the same time they were clear enough so that respondent did not misunderstand the question resulting in an erroneous answer or possible a very short answers. This was also one of the reasons why qualitative and personal interviews where considered suitable. It gave the author the opportunity to follow up on possible confusion and misunderstandings right away, something Svenning (1999) agrees with.

In this case the author used both a structured questionnaire seen in Appendix C. This was sent out in advance in order for the respondents to start thinking about their environmental work and the answers where also meant to somewhat confirm if SDS and Miljö Eko had a correct picture of the municipality. The questions in Appendix C are in accordance to the National text on sustainable development from Skr. 2001/02:172 page110-111 as well as the MiljöEko questions, and finally some questions by the author. The answers to the questionnaire are not published in the report since they where not constructed to help with the research question, but rather as an additional controlling mechanism of the environmental work conducted to date.

As described in the qualitative method part, the idea was to first establish a contact with the right person or persons within the municipality and book a meeting with said person(s). When the meeting was confirmed a document containing the questionnaire in appendix C was attached in order for the person to start thinking of what environmental work they have actually done. At the meeting the author would either collect the answers to the questionnaire, but ideally no time would be spent on this and the answers where e-mailed back.

The kind of interviewing normally carried out by qualitative researchers differs considerably from that associated with survey interviews. Whereas the latter tend to be structured, often with closed-ended questions, and standardized, qualitative research interviews are structured in a way that permits both the respondent and interviewer to mover around the topic at hand and look at it from different angles. The aim was to elicit the respondent's way of thinking around the issues with which the qualitative researcher was concerned with, so there was usually a preference for minimizing the degree to which they were constrained. This form of interview was more like a conversation where the respondent was allowed to speak for as long as he or she wanted. When using a more structured form of this interview the researcher uses a schedule, but recognizes that departures will occur if interesting themes emerge from what respondents say in order to get their version of things.

In this case the author had a few different approaches to the problem of understanding and gathering date in order to fulfill the purpose of the research. The work started with constructing the questionnaire that was sent out to the respondents (Appendix C). The answers to the questionnaire where compared to the benchmarking done by SDS and MiljöEko on top of this a general feeling of how prepared the municipalities where in their active environmental thinking could be surmised in some cases.

When the answers had been analyzed the selection process that had already been done by using SDS and MiljöEko was actually confirmed to be a solid one. After having confirmed that the municipalities chosen where indeed in accordance to what had previously been expected, new open-ended questions for a semi-structured personal interviews where constructed (Appendix D). The reason for a semi-structured interview was based on research that suggests that by using this form of interview you can detect personal feelings and emotions with the persons interviewed (Bryman 2000). This was perceived as a good way of getting to understand possible nuances in the answers that might otherwise be missed.

During the interviews, which where all held at the respondents place of employment the questions were used to frame the discussion in order to try to understand what kind of work had been carried out, why it had been done and by whom? This was done in order to get closer to answering the questions posted in the purpose of the research. The interviews would typically last anywhere from one and a half hour to four hours and could sometimes get very elaborate and outside of the posted questions.

The different answers were collected, analyzed individually and compared against each other. An allowance to position within the municipality was noted as well, in order to be able to include this in the evaluation. In addition to this the material was evaluated against the different theories described in the next chapter. This resulted in a set of statements that was sent out to the respondents to answer (Appendix E).

These answers were collected and summarized into the document seen in Appendix F. They illustrate a few things quite clearly. People understand questions differently deepening on position, sex, age and so forth, and also answer questions in different ways. Some respondents only answered by indication numbers, others had long explanations and a very interesting

thing can be noted, which is that even though a number value in answering a question can be different, the overall meaning described in the explanatory text might be very similar, which shows that people have different valuations of the same topic when it comes to numerical values.

The data that was collected in Appendix F was analyzed in the same way as the personal interviews and from the joint information a number of discussion topics where created and the final procedure was a panel discussion held at IIIEE, where preliminary results and ideas where shared with as many of the interviewees that could attend. The idea was to get a further confirmation of the end result by a panel group discussion and debate that further analyzed the findings.

1.6.4 Analyzing the results

Analyzing the results from a bigger survey is always tricky and in this case the purpose was not to validate an existing model or theory, but rather to find answers to the hypothesis that there are a number of triggering factors that enable municipalities to change from being a passive environmental community to being an active environmental community and also that these triggers are probably different from the ones you would normally see in a commercial market driven company. On top of this a purpose was described in order to find answers to three main bodies of questions. The results form the interviews, answers to statements sent out as well as the peer-to-peer panel discussion where analyzed with the help of the theory described in the next chapter as well as by having discussions with supervisors.

Since all the interviews where conducted with open-ended questions where the point was to get the respondents to talk and discuss how they perceive the environmental work done within their department and by the municipality it was important to get them to understand what the questions where meant do or even more what the research was about. According to (Svenning 1999) it was important to follow up on misunderstandings and confusion around questions posted which is why personal interviews are very suitable for in-depth research since it gives you the opportunity to go back and summarize what you perceive to have heard during the interview. The notion of letting the respondent change their answers as the interview progresses or after they have had time to think about it some more is also used in the Delphi method. According to the Delphi method it is also all right to use a feed forward approach where the interviewer tells the respondents about emerging thoughts and consensus of the work to date (Gordon, Theodore Jay, 1994: 5) In this case the author tried to accommodate this by first sending out a larger questionnaire to be answered by the individual municipalities. This was both a way for the author to confirm that the two separate benchmarks that had been used to select the municipalities were in fact somewhat accurate, as well as a way for the respondent to prepare for the personal interview that was to follow. When the in-depth interviews were conducted it was made clear that sidetracks and backtracking to former questions was in fact incurraged if new thoughts came to mind or if for some reason the respondents view had changed during the course of the interview.

In the end the author ended up with a notion of what the results where, but no hard and indisputable facts to support this. The second set of statements was sent out to try to confirm this notion. After having analyzed the answers to the statements a clear consensus had still not been reached and it was decided together with the supervisors that a peer-to-peer forum that was done in the Delphi way could actually reach some form of consensus to the gathered material.

This feed forward approach was used by the author both when it came to working the interviews but also when it came to analyzing collected data. As the work progressed it became clearer what theories or parts of theories could work and not work. This was also why the theory was mostly on organizational behavior and on leadership since the interviews revealed more and more that barriers and triggers for active environmental work where within these fields.

1.6.5 Delphi method

The Delphi method was designed to encourage a true debate, independent of personalities according to Gordon, Theodore Jay (1994). In this particular study the method was used to compile the statements for the panel discussion and then again to compile the results of the panel discussion where all participants got an opportunity to comment on the result of the debate. The statements, as has been mentioned earlier, were based on the analysis of the findings from the interviews conducted as well as from the answers to the statements that where sent out to respondents.

In a Delhi method it is important that no one particular participant can be pinpointed to a comment in order to encourage view changing in light of differences of opinion. This is something that has been used throughout the research in order to safeguard all respondents' answers. This was especially important since the number of respondents was relatively small. The Delphi method does not generally produce statistically significant results and they are not intended to do so either (Ibid) The value of the method lays in the ideas that are created both if they create consensus as well as if they do not. For this study the method was used as a tool to try to validate the ideas that had come out of the research.

1.6.6 Final analysis

Before starting an analysis or comparison of any kind it might be prudent to ask: Why are we doing this in the first place and what are we hoping to find? The actual analyzing of the collected interview material was done in many parts as was described earlier on in the chapter on how the results where analyzed. The difference with the final analysis was that the peer-to-peer panel discussion could be added into the mix.

During the panel discussion the respondents had an opportunity to discuss some of the findings of the research that where presented in the form of discussion topics. The purpose of the panel debate, as has been mentioned earlier, was to get the experts together who work with environmental issues everyday in order for them to discuss and theorize around the work to date. This was also deemed as a way to minimize the risk that the author's personal opinion influences the analysis too much.

The panel discussion data was compiled with the earlier findings and analyzed again in order to answer the research questions, as well as provide date for discussion and recommendations.

Normally case researchers use models to illustrate connections between different factors of phenomenon studied Lundahl & Skärvard, (1992), this is to simplify a description of reality which can be a real strength, but there is a risk that a model will leave out important information. Validity and critical review of the results

According to Eriksson & Wiedersheim-Paul (1999) you need to consider three major points when judging the validity of written sources, but the same should be somewhat applicable to interviewed sources as well. The three points are tendency, dependency and simultaneousness.

A research maybe heavily dependent on interviews from a relative small number of people, and there needs to be an awareness to the tendency of the respondent being interviewed having has personal interests or winnings in sharing certain information. There are also the issues of the interview being conducted in Swedish to later on be translated into English. The interviews where conducted in Swedish in order to avoid or minimize the problem with having a language barrier for the respondent, but the problem then was that the writer might unintentionally give a different translation than the respondent actually had intended. However, there are always risks that the respondents have a personal agenda when they are being interviewed and this is something to bear in mind, and this is something that was always taken into account by the author when translating and analyzing the data.

The dependency criticism implies that there needs to be some control on whether sources are dependent on one another or not. In the case of the municipalities looking at organizational charts can do this, but you cannot safeguard against the informal dependencies that do exist in all organizations. It was also one of the strongest arguments to keep all respondents anonymous in order to ensure that they feel that they can say more than they otherwise would or should. It was the researchers view that some of the respondents actually took this to hart and said a lot more than they would if their supervisors where present or could backtrack the answers to them, this again opens the possibility of dependency, which was just discussed.

The final problem revolves around simultaneousness, which was in regards to if the sources are up to date or not and in the case of the interviewed respondents it is hard to see how they would not be up to date. This problem was clearly more suited for written media, but non the less it is important to consider since there could be a discussion if environmental benchmarking done four years ago has any validity today.

The author tried to have all of these points in mind when conducting the interviews, as well as when studying the written material that exists.

2. Theory

In search for interesting theories, or material to construct a frame of reference to work around when it comes to active environmental work in municipalities the author started the research project by broadening the theoretical base to include the private sector as well as the public sector. Reading several articles, books and reports both on environmental work done or being planned as well as drives for change within private companies and success stories for environmental work within Swedish municipalities. The primary sources of information on material to read was the university library, the IIIEE library different databases, such as Affärsdata, Artikelsök, and EBESCO with different settings, Libris, Lolita and ELIN.

After looking into these different venues for published work the results seamed meager and this was of concern to the author. It seamed strange, not to say very unlikely that there would not be models and theories around what would drive and trigger change within Swedish municipalities. The author did ask respondents about related work and articles they might have read or heard of during the initial interviews and some articles where found. These all related to the mandatory environmental work and problems related to this. After having gone back to the librarian to ask for more assistance and ideas of where to possible find material nothing was forthcoming. During this time, a notion of what actually drives the change within municipalities had begun to emerge along a feeling of some of the barriers for change. In any organization there is a culture and a structure and as the work progressed more and more focus was put onto the organization within which the respondents worked as well as the actual people with whom they worked. It was therefore natural with the author's background in organization that in interest was sparked, and more focus was put into trying to understand the driving sources for the public organization in comparison to the private one.

In a final effort to try to localize specific work that looked to drivers for change within the municipality as well as work done on what signifies an active community a specific e-mail was sent out to all of the respondents to see if they could ask around within their organizations to see if anyone had heard of, or read such a work, but nothing concrete came from it.

In the end many articles and books where of lesser value in the work, but a review of the more interesting articles and books can be found later in this chapter.

2.1 Literature review

Porter (1990) has identified three major drivers for change within the environmental field for a commercial company in the twenty-first century; they are: legislation, economy and stakeholder pressure.

Legislation: This was somewhat self-explanatory, but indicates that there are International-, national- and local laws on what is permitted when it comes to production and pollution. There are departments at different levels with inspectors who enforce these laws, some more successful than others. The point being that when there are laws governing companies that usually indicates that compliance will be met.

Economy: This aspect can be studied from different angles, one of them being that when you are in a global downturn of the economy, as we have been for some years now (Karlsson), companies need to find ways of cutting costs. They look to all sorts of scenarios to save on material, energy, personnel and environmental costs in the form of taxation for emissions. It was then of interest to drive change if it improves the bottom line in any positive way.

Stakeholder pressure: This could also be named outside pressure and was indicative of the fact that media, interest groups, motivated single individuals and so forth have real power and can create dedicated opposition to any organization or company.

The question is if these drivers for change can be applied to municipalities? It was the researcher's opinion that the drivers that Porter identifies can definitely be identified as at least influential on the municipalities that have been interviewed.

Taking the notion of stakeholders and the pressure they can exercise was a fact that was supported by such a simple fact of reporting in general is an important communications tool to all stakeholders[8](Holliday and Pepper, 2001: 24). What has changed over the years was the stakeholders desire for diversified information. It was no longer enough or acceptable to just get financial information. Many stakeholders and investors actively look for Socially Responsible Investments (SRI) Randjelovic, O'Rourke and Orsato, (2002: 3) which has increased the demand for comparable reports that cover more than just economic and financial figures. This has forced more and more companies as well as municipalities to start reporting on other issues than economic figures. Some companies have now gone as far as starting to report on a triple bottom line basis and many municipalities have environmental reports. The fact that companies such as Volvo, Ericsson, ITT-flygt, ABB and Novo Nordisk have already started reporting on a triple bottom line was mention in the first chapter of the research.

In the work of Fält, Lidgren & Pierce (2000) a lot of attention is projected on stakeholder pressure and their ability to influence and control the company. The notion of stakeholder pressure could be of significance when it comes to internal power struggles within the municipality i.e. if individuals or special interest groups are what trigger change. In their work different models for change and stakeholder pressure are discussed. One model in particular by Mitchell, Agle & Wood (1997) is of interest for this research, it describes three attributes that can be used to describe stakeholders: Power, Legitimacy and Urgency. A stakeholder can have one or many of these attributes and this according to Mitchell et al is what determines their power.

Mimic and Thornström (1997) look to important factors in order to succeed in implementing a environmental policy within the city of Gothenburg. This work was similar to the research question of what the triggering factors enabling active municipality environmental work are, as well as looking to the barriers when it comes to active municipality environmental work. Mimic and Thornström look to some critical factors for success and in their work give some guidance to barriers as well as to what could trigger changes.

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[8] The importance of communication is something all reports have in common.
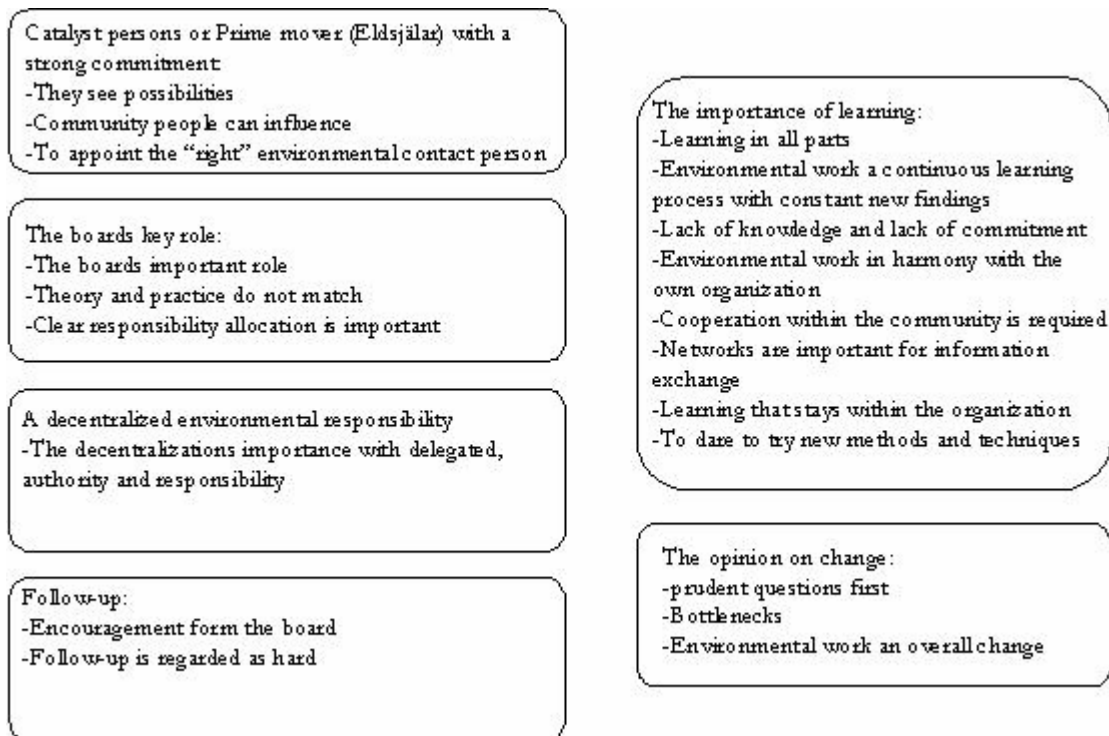
Figure 2-I Critical factors for success when implementing an environmental policy, Translated from work by Mimic and Thornström (1997)

Other organizational literature such as Gibson, Ivancevich and Donnely (1997), Lowendahl (1997), Sandberg and Targama (1998) and Granberg (1995) where consulted to try to find ideas and topics that could explain change and triggering factors within organizations be they private or public.

A number of shorter Internet articles related to municipal environmental work where also studied to confirm initial thoughts and ideas to triggering factors. In Trollhättan municipality they have identified five key factors for success in their environmental work.

- To visualize the environmental processes often, by giving out information both within the own organization as well as to the general public and private companies

- To focus on their core competence

- To exchange knowledge and results between different departments, since someone has probably already invented to wheel you need

- Identify worries, expectations, strengths, weaknesses and the business driving forces from a management perspective

- Truth Sayers can be lent in from outside, since it is good to have outside people talk about environmental management

According to World Resource Institute (WRI) there are a number of drivers for change when it comes to companies.
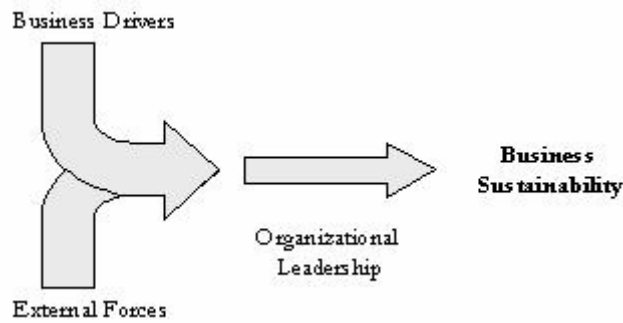
Figure 2-II Drivers for change for a company Source: World Resources Institute

According to WRI drivers for change can be:

For business:

- Reputation and license to operate

- Cost Reduction and Eco efficiency

- Market growth

- Market pressure

- Corporate values and leadership

For external forces:

- Environmental trends

- Social trends

- Market opportunities

- Legal/regulatory trends

- Technological change

The work carried out by WRI might seem unrelated to municipalities at first but some issues are clearly the same when looking to the collected interview material. Trends, regulations, values, leadership, Cost reduction and Eco efficiency as well as general reputation are all issues that consider a municipality as well. Technological changes can change the equation for some investments that were formerly not feasible to be feasible on example of this is centralizes sewer treatment in Svedala.

The essence of this work was to understand triggers and barriers for active environmental work within communities. The fact that no direct model for the general questions and the specific research questions could be found, was not an insurmountable problem since the material that was available, as well as good discussions with supervisors, where on, or around the subject, and this helped the author achieve a better understanding of the issue at hand.

After going through the different theories and evaluating them against the actual results form the interviews it was clear that the initial hypothesis was at least partially correct. There seemed to be a number of triggering factors for environmental change within the municipalities, just as there have been a number of triggers identified for commercial companies. The interesting thing was that if you where to look to just one or two theories for environmental triggers for commercial companies you could clearly say that they do not cover all the aspects for change that came up during the interviews, but by looking at a number of different organizational theories form different schools and backgrounds it would seem that you can cover most, if not all, of the issues that came up as being important during the interviews.

3. Case studies

3.1 Introduction to the municipalities

In order for the reader to get a better background feeling for the analysis, a short introduction of each municipality was done in the following chapter. All of the information was taken from the municipality WebPages, the Swedish statistical institute and from interviews with employees in the different municipalities.

3.1.1 Klippan

Klippan, situated in the Northwest of Skania, got it's present geographical layout when in 1974 Riseberga, a part of Eastern Ljungby and Klippant where merged into Klippan municipality. The current area is approximately 376 square kilometers divided in 51% forest, 42% agricultural land and 7% of "rural" areas as well as roads. In 2002 there were approximately 15500 inhabitants.

Klippan has one major throughput road (E4:an) as well as two lesser roads 21 and 13. On top of this there was the railroad Helsingborg-Hässleholm and a civilian airfield in Ljungbyhed.

The municipality has defined goals and visions for as what they believe to be the best quality of life for the people who work, live and happen to occupy the region. The environmental goals look to such things as HSE, living children, education, employment and quality control of all aspects of the goals. In accordance to this they publish an environmental account.

They have been actively involved in securing their future water sources by restricting farmers as well as industries in their chemical treatments. They have also looked to CO_2 sequestration by constructing wetlands and lakes. They have started looking at ways of changing traffic patterns in order to reduce pollution both in emission and noise.

3.1.2 Kävlinge

Kävlinge, situated in the Midwest of Skania Kävlinge's area is approximately 154 square kilometers dived in 70% agricultural, 10% rural, 4% forest and 16% of "other" area. In 2002 there were approximately 24 500 inhabitants.

Kävlinge has one major throughput road which is E6 and more than 35 000 vehicles pass by every day. They also have the west coast railway system that goes through the municipality.

The municipality has tried to foster a curiosity around the environment and also tired to encourage people to take active measures to ensure the future environment by offering a yearly environmental price with a price sum of 10 000 Sek. Kävlinge has also actively started looking to future water availability as well as more [all mans right][9] areas. Kävlinge has also recently adopted a formal plan of noise sanitation from vehicle traffic.

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[9] Free translation of Alemansrätt.

3.1.3 Lund

Lund, situated in the middle of what is commonly called the Öresundsregion. It covers approximately 431 square kilometers. In 2002 the municipality had approximately 100 000 inhabitants.

Lund has a few major roads running through E22 and E6 are the biggest but also road 108 and 11. Lund is also an axis for most heave railway going to the continent.

The municipality has a very well developed old and new agenda 21 plan, an overall environmental policy and are generally well aware of the environment, what they are doing wrong and what needs to be controlled even if they might not be able to do so for various reasons. This municipality is active in mostly every field, when it comes to environmental work, water, CO_2 sequestration, infrastructure work, waste water, waste and so forth.

3.1.4 Staffanstorp

Staffanstorp, situated in the South of Skania in-between Malmö and Lund. Staffanstorp's area is approximately 108 square kilometers with 83% in agriculture. In 2002 the Staffanstorp had close to 20 000 inhabitants.

Staffanstorp has one major throughput road, which is 108. There was a lot of heavy traffic on this road and it is a cause for concern. There are no heavy industries in Staffanstorp but a lot of SMEs.

The municipality has an agenda 21 plan but it was discontinued some years back. The overall environmental thinking is not the best. They have done some remarkable work with there waste water system. Only 96 houses that do not meat the regulatory requirements for private wastewater treatment are not hooked up to the system. This was a very low number especially considering the geographical structure of the municipality. They have started construction of some CO_2 sequestration dams and the people at the environmental office have recognized the need for a lot more natural parks since they have the lowest number in Sweden even though there is no official word on how this could be accomplished within the municipality.

3.1.5 Svedala

Svedala, situated in the South of Skania, to the east of Malmö. Svedalas's area is approximately 219 square kilometers divided in 55% agriculture, 15% forest, 6% pastures, 3% inhabited area and the rest is undefined. In 2002 Svedala had 18 000 inhabitants.

Svedala has one major throughput road in the form of E65. There was also a railway passing through the municipality from Malmö to Ystad and there is the international airport of Sturup.

The municipality has a very well developed old and new agenda 21 plan, an overall environmental policy and are generally well aware of the environment, what they are doing wrong and what needs to be controlled even if they might not be able to do so fore various reasons. They have many LIP projects running with CO_2 sequestration as well as alternative wastewater treatments dams. They have far reaching designs to see how rail and air traffic will affect their community in the future. They are looking to establish bike trails as well as camping areas within the municipality in the near future.

3.2 Interviews

In order to get the open-ended discussions and conversations required for the research a series of discussion points where created and voiced during the interviews. The questions with different answers are listed below. The origin of the answer is not revealed, but there is an indication of weather or not the answer comes from a municipality that is generally considered to be doing better or worse when that is of interest. Each section is also followed by a brief conclusion.

- How does the TF or the environmental units work and responsibility influence the health goals that are posted by the government? (Health in the environment, sound environment, increased physical activity, safe food supply etc)

This question was meant to do two things. One: to see if respondents would focus on the regulatory supervision that is done. Two: to see if there was a feeling that the health goals are indications of what can be done in order to be an active municipality.

All municipalities have a supervisionary or regulatory responsibility for health and safety in industry within the municipality, whether that be food or chemicals. Generally, supervision was done as well as can be expected with the resources at hand. Some municipalities charge for the supervision and control, but in some cases it is included in the taxes. In some municipalities there was a feeling of unease since they in affect have to control and supervise their own employer in certain areas, there was also some concern in the smaller municipalities that there can be an issue of conflicting interest when some local politician might not approve of a strict rating and control of the local industry which is a large tax contributor.

One municipality, that was generally doing well, believes that their work was having an ever-increasing impact on the health goals. They received a new environmental CEO some years back and immediately started charging for all supervision, which enabled them to employ more people to do more supervision as well as divert some efforts to more strategic work which is now paying of in the form of all supervision is being conducted with the fifteen national environmental goals in mind. They also believe that their agenda 21 work has panned out very well and has helped many business with their environmental thinking and awareness. Their philosophy being that you have to work from the roots and up not from the top and down. This was interesting since an other municipality, which has not done too well with their environmental work, discontinued their agenda 21 work some years back since upper management did not see any point to it. According to the respondent management believes more in exploitation than in nature and this is why there is no real interest in active environmental work. An other municipality that has not performed well either claims to have similar problems as the former municipality and this was largely do to the organizational structure where the environmental department is reporting to the planning board and they sometimes have conflicting interests and this also then means that they have to do supervision on their own employer.

Conclusion: It seemed that all municipalities recognized that the surveillance was important to the health goals posted and that there needed to be control of businesses in the municipality. The interesting thing was that some of the municipalities believed that by adhering or trying to surpass the fifteen national environmental goals they would be a more active environmental municipality and also better suited for future environmental challenges.

- How is the municipalities' environmental work affected by local conditions? E.G. number of inhabitants, economy, general educational level etc?

The question was meant to help give part of the answer to if municipalities would behave differently from private businesses. Do the condition of local environment influence them in any great way?

The answers went apart quite a bit. It seemed that the two municipalities that have been performing well in SDS and MiljöEko think that it was positive to work in a small municipality where they got a lot of support form the local [municipal counsel person][10] in one case and where the overall organization of the municipality supports all environmental work in the other case.

One municipality thought that their generally low educational level could be somewhat of a problem since they had a real hard time finding local qualified laborers. The same community also believed that sparsely populated municipalities might have somewhat higher costs when it comes to water and sewer charges.

One municipality did not think that education, wealth, or they number of inhabitants had anything to do with the result of the environmental work conducted. Only the interest and attitude of the upper management (or politicians) have a real impact on the environmental work that was or should be conducted within the municipality.

Jet another municipality seconded the opinion that neither the population nor the general economy had anything to do with the environmental work. Strong politicians or a goal oriented Municipal counsel person as well as influential interest groups or opinion groups are what can influence the environmental work that is done.

Conclusion: It was hard to see anything that would support the notion that education of the population or the overall economy of the municipality played any key role in how the environmental work was carried out. The one thing that all respondents did agree on was that interest and attitude from upper management and politicians did play an important part in how the work was carried out and also in the way the organization perceived their future work environment. It might be that education in environmental issues did in fact foster this interest and attitude by upper management, but this was not explored.

- What potential is there within the region? How could these be realized and what effect could/would this get?

The question was meant to understand how the respondents saw their own organization in the future. Did they perceive the future to hold big changes for them or the organization and how these changes then would be realized? It was also meant to indicate if they had a positive view of their working environment in the future.

In one of the municipalities, which has performed poorly, the opinion was that there where not enough resources to conduct the mandatory supervision let alone to have any time or recourses to have an environmental strategy. The overall opinion being that there where no visions of environmental thinking and hence no will to support environmental projects.

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[10] Municipal counsel person refers to the Swedish word of kommunalråd.

An other municipality thought that it could be a good idea to have an environmental advisory board to the decision makers something both the better performing municipalities have. The same municipality also thought that it would be a good idea if you separated the supervision to be a national government with local associations instead of having it under municipal control.

One interesting topic that came up openly in one municipality and somewhat between the "lines" in two other communities was the fact that there was a feeling that it was hard for politicians to shoulder the responsibility for long-term environmental thinking since they typically only think within the elected time periods.

Conclusion: There was a certain hesitation in regards to the future of the municipality. Many respondents felt that the politicians that had control of the strategic planning lacked the will to do what was necessary in terms of the environment if this would jeopardize their possibility to get reelected. For the municipalities that had generally done less there was a bleaker outlook on the future of their environment as was aptly described as: since there is a lack of vision of what the environment is or should be, then their can be no strategic planning for the future environment.

- What do you consider to be the five most important environmental goals for the municipality?

The question was meant to se what the respondents viewed as being the most important goals and also to see if these differed from what the municipality officially might have stated to be the important goals.

In this question there where some similarities between the municipalities that have generally performed better in reviews. They claimed that infrastructure thinking in the long run was important i.e. to know what standpoint and opinion to have in different infrastructure issues ahead of time. To have an environmental protection program that was connected to the 15 national environmental goals. To have an environmental management system that was connected to the 15 national environmental goals as well as implemented within all parts of the public sector. To have an overall plan for the municipality where the environmental thinking was an integrated part of it.

In the municipalities that have not performed as well, other issues where deemed to be important or higher up on the agenda. The top one being to ensure safe and good water supply. Traffic control and to get a grip on noise- and emission-pollution where also high on the agenda as where safe living conditions and to live up to the emissions regulations. An other big issue for these municipalities was to ensure more green areas for the inhabitants as well as safeguarding the parks and pastures there are today. The waste disposal system was mention by one municipality as a source of concern where they thought that we might have to rethink the whole disposal system.

Conclusion: The responses varied between municipalities that had performed better or worse but where fairly constant within each segment. It seemed that municipalities that had a better environmental record had been able to raise their environmental horizon a little bit more as compared to the others.

- Why does the municipality conduct active environmental work?

The question was intentionally provocative, and was aimed to understand if there was consensus within municipalities as to why they actually carried out environmental work and also if this meant more to them than just mandatory work.

In the more active municipalities the general feeling was that the staff was very committed to environmental work and that they had done some good projects that had empowered them as well as boosted the general environmental awareness within the community. In both of the communities the environmental staff where also part of all major decision making bodies. One of the municipalities also claimed that the cross-sectional group working with strategic environmental thinking were all relatively new to their positions and hungry for change and that they generally would not take no for an answer unless it was extremely well motivated.

In the other municipalities the notion of why they do environmental work was somewhat divided. In one municipality they thought that the only way to survive in the long run was by being active with the environment. One municipality said that the only work they did was what was required by law and if anything outside of that scope got done it was more by coincident or pure willpower by people in the environmental office. This was seconded by an other municipality who claimed that all work required by law got done and sometimes there would be some time and resources left over when you could look to some active work.

Conclusion: The question of why environmental work was carried out did not get a conclusive answer but it seemed that there was a consensus on that active environmental work that did get done was due to dedicated individuals with the vision and power to see projects though.

- What has been done so far and what where the main reasons for focusing on these aspects? What was the trigger for the change being made and who was responsible for this process?

The questions where aimed at understanding triggers and barriers to the environmental work carried out to date.

The most frequent answer was that one of the biggest triggers for change over the last years was the mental change in employees within the public sector and the private sector. There was a better awareness, understanding and acceptance for a need to consider environmental issues today, compared to 5 years of. This could be seen as an indication that specific education about environmental issues has paid of.

Many municipalities have worked with LIP money to create CO_2 traps. Some municipalities have worked with wastewater treatment and waste separation. As mentioned before all are aware of the importance of water and securing the future water supply.

All municipalities have worked actively with farmers to reduce over nourishment of the land.

The more active municipalities are looking to implement environmental thinking and awareness within all fields of public service from a bubble up trickle down kind of view.

Conclusion: All municipalities are aware of some changes that need to be made. All have worked with CO_2 sequestration and/or with information to farmers and private employees of local businesses. The question is how much of this work should be considered to be active environmental work since it for the most part were the LIP founds that started the processes.

The one positive answer to the question was that all respondents had a clear feeling that internal attitude for environmental thinking was slowly changing within the municipality.

- What is the single most important environmental decision that has been made within the municipality?

A clear and concessive question to round of the interviews with in order to see what respondents felt was the most important environmental project that had been conducted and if this coincided with some of the answers given previously.

For the municipalities that have gotten further the answers where similar and referred to the fact that the environmental awareness was now implemented in day to day decisions for the municipality in the form of an environmental policy that all decisions had to adhere to.

The other municipalities had other issues that where important. The top two where that groundwater safety was understood and prioritized and that noise pollution was something that needed to be controlled.

Conclusion: The differences between the municipalities was clear depending on how well their general environmental work was in prior surveys. It was not that any of the answers indicated that the work carried out was not of great importance, but there was a difference in what was perceived as important. From awareness and understanding of the environment in day to day decisions in the more advanced municipalities to safeguarding water and general living conditions in the other municipalities.

3.3 Analysis

Mandatory surveillance:

The environmental department of all the municipalities have a duty to perform mandatory surveillance on a number of internal organizations of the municipality, as well as on external businesses such as restaurants, farms, animal welfare, industry and so forth.

Thoughts on this service are divided. All municipalities are in agreance that this was a very important service that needed to be performed. They also agree that they do not have enough resources to perform surveillance to the level that they would really want to. According to Peter Vänster of [municipalities joint organization][11] this was nothing new though; municipalities always feel that they do not have enough resources. Most of the municipalities feel that they do have adequate control of the surveillance though and by increasing the fees for it they could increase the staff working with surveillance if the needs arise. The issues that divides the municipalities are the issues of the surveillance being a local organization that is under the control of the local municipalities and not a national branch of environment. The municipalities that are performing better according to the surveys, done by the researcher, do not feel that this was a problem. The lesser performers feel that their own employers, be that the nearest boss or in some cases the Municipal counsel person, try to get them to downplay some of protective environmental work that needs to be done. E.g. going light on farmers over fertilizing or being more lenient towards the planning commission when it comes to granting a new shopping center and so forth. The same problems do not seem to surface in

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[11] Author's translation of kommunförbundet.

the more successful municipalities nor in the larger municipalities. This was also in line with what has been shown in other studies such as [Expert group on public economy](2000) and the Swedish association of scientists (2001).

This study was not conducted in order to evaluate the mandatory surveillance, but rather to look to triggers and barriers when it comes to active environmental work. It might be coincidence that the municipalities that have not performed well also feel reluctance to being under local control. It could be an indication that they for some reason or another are not allowed to perform their work in the most effective or strategically correct way. It might also mean that in the municipalities where they do not feel that it was a problem of being under local control they have been doing well over the last couple of years and that they might change their mind if the circumstances changed. There was also a statement from Total Quality Management (TQM) that when things are running smoothly in the "river" you do not see the boulders under the surface, but when you lower the water level you will start finding the boulders that are in affect hindering the water flow. In affect this synonym can be applied to communication or to monetary founds meaning if there were good communication there would be a lot of leeway and freedom within which to act and if there are good monetary resources you can always hire more people if you have a bottle neck, all this changes when the "water level" goes down.

Being environmentally active:

<u>Triggers:</u>

During the interviews a number of triggering factors or possible triggering factors where brought up. In many of the cases where environmental work outside of the mandatory had been done it was in some way initiated by either a civil servant working for the municipality, by a motivated politician or by outside pressures that forced a change.

The civil servants are the engines behind all of the environmental work within the municipality. They do the day-to-day work, they are most often the catalyst required to get politicians engaged in the local environmental work. In all of the cases the respondents referred to motivated staff and dedicated environmentalist when it came to the people working with the municipalities environmental issues be that strategic thinking in the few cases where that was a norm or if it was mandatory surveillance.

The notion that individualist and prime movers can help trigger or even drive change was supported by the work done by Mimic and Thornström (1997) when they looked to success factors for implementing an environmental policy in Gothenburg. Fält, Lidgren & Pierce (2000) also discusses the issue of stakeholder pressure and their ability to influence and control companies. The notion of stakeholder pressure was valid in this case, since going by the work of Fält, Lidgren & Pierce you could classify any civil servant with the ability to influence as a stakeholder, and if you further that thought to Porters work on environmental change within a company one of his three reasons for change was stakeholder pressure. Therefore it would seem as if municipalities in this instance behave the same as any commercial company.

Motivated politicians are, in them self, figures of power, at least on their own playing field. In the interviews it was made very clear that no work could be done if the local municipal counsel person was against the idea. In two of the municipalities they had a special environmental counsel that could lend the environmental department more power and theoretically go outside or beyond the wishes of the local municipal counsel person or the

other politicians. They are what Fält, Lidgren & Pierce described as a definite stakeholder, i.e. they have the power to get things done, and get it legitimated. Mimic and Thornström, also talk about the importance of management in order to succeed with implementing environmental policies. The world Resource Institute talks about the importance of corporate values and leadership trends when it comes to companies' ability to change into sustainability. It would seem then that municipalities are driven by the same principles in this case.

Outside pressures can definitely trigger change. In the interviews the article of Tove Zellman came up a couple of times and in one of the cases it was stated as a direct result of this article the local politicians demanded to be better informed and that a new "action plan" needed to be put in place to avoid further embarrassments for the municipality. This was a clear case of the municipality wanting to avoid bad will, which is something that World Resources Institute talks about in the forces that can trigger change within a company. In this case municipalities also behave in the same way as companies.

An overall trend or issue that was picked up in-between the lines of the interviews was that many of the respondents felt that the environmental awareness has grown within the municipal organizations over the years and that this was either do to pure endurance of trying to influence on their part or maybe that the environmental and social trends are slowly turning where people in general and social servants in particular are more aware of the environmental challenges facing us. This could also be an underlying trigger to change or at least a facilitator to other triggers for change.

Barriers:

During the interviews a number of barriers to active environmental work or change towards more active environmental work where identified. The biggest barrier to change, according to respondents who sought change, was perceived to be the actual organization in which they worked. Be that the actual structure of the organization, the existence of persons who have a lot of local power who do not want to see that power changed, or a general lack of interest or understanding for environmental issues.

The persons with a lot of local power were often mentioned as a problem or a potential problem especially in the smaller suburban municipalities. This coupled with a mentality of "scratching your friends back" were factors that came up as barriers to doing any active environmental work. It was often hard to even do the mandatory surveillance in a professional way. This was also mentioned in [Swedish association of scientists] report as well as in the ESO report.

The fact that they are social servants, but are being run by politicians who more often than not take political decisions not decisions based on what was good or best for the environment in order to not endanger their position in the next election was perceived as a big organizational barrier. The wish to be a governmentally run local agency was raised by many of the respondents, this they felt would at least ensure more continuity and stability in their work and it would also ensure that the local organization could get away from the influence of local power bases as well as the "back scratching" mentality, and be as strict as they would really like to be as well as charge the actual costs for surveillance.

There are large numbers of literature on organizations, leadership and change for leadership and organization, but the important thing to take to heart was that a well functioning organization was not a guarantee for success, but a non functioning organization was an almost certain guarantee for failure.

Some costs are higher for smaller municipalities for instance water and sewer control over larger desolated areas, but according to MiljöEko it was a myth that smaller municipalities should have a harder time to be active when it comes to environmental thinking something that most of the respondents agreed with. However the fact remains that if there was no funding it was hard to do work. If the environmental agency was not permitted to charge for its mandatory services or not charge enough they were effectively being tied behind their backs since all their remaining resources have to be channeled to mandatory work. This is one area where municipalities do not follow corporate trends since cooperation's could have Cost Reduction and Eco efficiency in mind when looking to becoming more sustainable and environmentally active according to World Resource Institute.

One aspect that struck the researcher after going over the interview material was that there seemed to be a big discrepancy in the general ambition level of the different municipalities that also reflected in the apparent ambition level in the respondent interviewed. In one case the respondent wanted to do more and was ambitious, but there seemed to be a general air of hopelessness to the whole department where they felt that nothing they did that was active would make any difference since the idea would never be more than just that, an idea. In another municipality they seemed perfectly happy with doing the mandatory surveillance and nothing more than that. It would seem that the general interest in the environment could also work as a barrier for change just as much as the organization it self. The question of course then becomes if one feeds or creates the other?

<u>Summary of triggers and barriers:</u>

Civil servants were perceived as important triggering factors for change and they often work as catalysts to inform and motivate politicians in order to achieve change. Politicians, as the ultimate decision makers, are also important triggers for change. Both could be called prime movers in their own right if they work for change. The threat, real or perceived, of outside pressure was also an important factor to initiate any change. These three triggers could all be considered stakeholders exercising pressure for change and this then could turn into the triggering factor for said change.

The biggest barriers for active environmental work was in all cases connected to the organization. Either the respondent felt that the actual organization needed changing or the structure of the organization. The other case that emerged was that the respondent felt that people within the organization needed to be changed, not necessarily because they where doing a bad job as much as they might be in the wrong position to exercise that job. The problem of who or what part of the organization controlled whom and what was also voiced as a concern when it came to being an active environmental municipality.

The fact that political agendas might not coincide with the environmental agenda, or even to what should legally be done, was voiced as a real barrier. There was some discussion around budgeting and the interesting fact that many respondents did not see that costs involved in environmental work as a problem. The problem was to look at environmental costs as savings that would or could end up helping the overall budget for the municipality. The final barrier for being an active environmental municipality was perceived to be the different ambition levels between the municipalities.

3.4 Statements based on the first analysis

After the first analysis was done a number of statements where drafted. The intention was not to be provocative in anyway but to verify if the respondents agreed with the researchers

emerging thoughts on the subject and also to get one more round of ideas into the process before the panel discussion. This was also in accordance to the Delphi method. The statement roaster used can be seen in Appendix D.

The statements were done in a similar way, but did not necessarily indicate the results of the research to date.

- It is true that the general educational level of the population does not influence the municipal environmental work in any way!

- It is true that it is only political will or politician's interest that governs how well the municipal environmental work is in the long run!

- It is true that prime movers can force/push through an entire municipalities environmental work regardless of their own position!

- It is true that influential persons within the administration can single-handedly slowdown or halt the environmental work within the municipality!

- It is true that influential persons within the administration can single-handedly s force/push through a active environmental program within the municipality!

- It is true that things such as number of inhabitants, area distribution of the municipalities land in farmland, forest and water does not influence if the municipality can execute active environmental work!

- It is true that all municipalities have the potential to be in the forefront for active environmental work!

- It is true that interest groups outside of the municipality can influence the environmental work!

- It is true that the risk for "bad will" or bad publicity influences the municipality's environmental work!

- It is true that the general educational level within environmental thinking has been raised within the municipality since the agenda 21 program started!

- It is true that if the mandatory surveillance was under governmental control and not municipal control, then more active environmental work would be performed on a local level!

All statements where drafted as: It is true that… And then the respondents could circle a ten-point scale from one, which signifies totally wrong, to ten, which then was totally right. There was also a comment box, which was used to explain how they had reasoned around the statement.

After having analyzed the results shown in the table in Appendix E there was one thing that was obvious from the start. Different people perceive questions differently and this makes for a harder analytical process.

3.4.1 Analysis of statements

During the first interviews it was hard to see anything that would support the notion that education of the population or the overall economy of the municipality played any key role in how the environmental work was carried out. In specifying if education had something to do with it the answers were somewhat different. Two of the municipalities thought that education had nothing to do with the environmental work and two did think it could play a role. It is interesting to notice that Mimic and Thornström as well as the work carried out in Trollhättan municipality indicate that learning and knowledge sharing is very important triggers for environmental change. It might be the form of the question that education per say does not help the environmental work, but maybe knowledge and understanding on the specific issue does foster change.

One thing that all respondents did agree on, in the initial interview, was that interest and attitude from upper management and politicians did play an important part in how the work was carried out and also in the way the organization perceived their future work environment. The answers from the statements posted did show, however, that politicians do not govern the quality of the municipal environmental work in the long run. What the respondents did agree with was that prime movers could push environmental thinking in certain directions. The importance of management is supported by WRI and Mimic and Thornström.

The two interrelated statements about influential persons ability to slowdown or push through environmental programs was not total conclusive. The notion of one person being able to slowdown an environmental program in progress was something all respondents agreed upon either in the numbers they indicated or within the explanatory text. The same person was not perceived to be able to push trough an environmental program. Two respondents though it could be done, one did think it could be done with the help of others and by education the non-believers. The fourth respondent did not think that a single person could make such a difference. This is a case of stakeholders and stakeholder pressure that Fält, Lidgren & Pierce as well as Porter mention in their work. The extent to which the stakeholder can or can not influence depends on their power, urgency and legitimacy.

A majority of the respondents did not believe that the number of inhabitants, area distribution of forest, farmland and water should play a role in if the municipality could perform active environmental work.

Since all municipalities had worked with CO_2 sequestration as well as with information to farmers and private employees of local businesses, you could say that they were aware that some environmental changes needed to be done. They also felt that there had been a general change in people's environmental thinking. But when it came to the statement if all municipalities did have to potential to have active environmental work and be in the forefront for this they where divided down the middle. The municipalities who where doing well already, thought that anyone should be able to be active, where as the lesser performing municipalities disagreed unless there was a change in attitude. That notion of change in attitude went well with the belief from all of the municipalities that interest groups outside of the organization could actively influence their environmental work. That statement was further supported by most of the respondents acknowledging that the risk for bad will did influence the municipalities' environmental work.

3.5 Statements for panel-discussion

After having analyzed both the first interview material as well as the additional answers to the statements that where shipped out the researcher constructed a few final questions for discussion in the focus group study.

What is an active environmental municipality to you?

The idea with this question was to see if the respondents within their peer group had a clear view of what they perceived to be an active community. There has always been complaints around how benchmarking surveys have been done and that they do not include the right questions. If you had the answer to what a active community or municipality was or was supposed to be you could construct the questions after that.

What is a passive environmental municipality to you?

The idea here was naturally to get the opposite of the previous question in order to se if the answers where consistent.

What stops all municipalities from being active in their environmental work?

This was potentially a very interesting question. What barrier(s) exists that hinder all municipalities from being great role models for business and persons alike when it comes to environmental work?

Would you say that a municipality could be bad at its mandatory surveillance work but at the same time be outstanding in its environmental work and vice versa?

Could it be that an active industry forces the municipality to be environmentally active? Leading back to the former discussion topic. If you have an outstanding surveillance workforce on the municipality does this not ensure that you have an active private sector when it comes to environmental work? If this is true does this then circle back to forcing the municipality to be even more environmentally active?

4. Focus group study

4.1 Results of panel-discussion

Active:

On the question of being an active environmental community the municipalities had a hard time answering or agreeing on the question, since they all had different opinions on the matter. One respondent felt that all municipalities where inherently bad at taking care of even the mandatory environmental supervision and not that the people working were doing a bad job, but that they lacked resources to do a good job.

The respondents were somewhat agreed that an active municipality would have to try to be a bit ahead of schedule in comparison to legislation and environmental ideas. This was something that one of the municipalities that is considered to be doing well, thought they were bad at.

An active community would also have to work on the bigger picture and to a longer timescale. They would typically have a holistic view of problems and looking to the total cost of projects over time or more to the point, what should be done, how should it be done and can the municipality afford to do it this way? Thinking in budget years is not enough; you need to think focus on the broad picture. One idea that emerged was that you needed to have some form of base level of environmental work in place and then resources should be pooled and built from that.

Education, and then especially for child education, was voiced as an important factor for being an active municipality. The municipality needs to create leeway for environmental issues. The environmental thinking needs to saturate all decisions within the municipality, and this can only be achieved through education of the changes needed.

If the municipality sees the mandatory surveillance as an evaluation of their own strategic work and not as just a tool to evaluate what local companies have achieved it indicates active thinking and the ability to plan ahead and help companies understand and be responsible for their environmental impact.

Passive:

When it came to being a passive community the respondents agreed on three topics. The passive municipality is often very focused on economy and costs, typically there is a budget and you just need to get things done within that budget. You look to costs not to results.

When the organization fails to realize that the environment is a part of the social heritage you can speak of passive- or no environmental thinking according to one of the respondents.

When there is no long-term goal or view of the environment the work is often reactive which to the respondents indicated a passive environmental thinking.

Barrier:

The question of what stops all municipalities from being active was potentially very interesting. What barrier(s) exists that hinders all municipalities from being great role models for business and persons alike when it comes to environmental work?

The issue of communication was mentioned as a significant barrier for all to be active. The notion that we all have different vocabularies was mentioned as another barrier. The fact that it is not always environmental people can concretise what they mean and often the environmental part of planning comes in very late in the process and in doing so causes a lot of changed plans which usually upsets the timetable and budget. The better the different parts of the organization communicate, and the sooner the environmental thinking comes into the planning, the sooner municipalities become more environmentally active.

One thought was that it might be a generational and educational issue that stops some municipalities from being active. The notion being that younger people view the world and organizations in a different light than older people do. This would then indicate that municipalities who lack a younger workforce would have a harder time of becoming active. An idea of educational factors was raised as well, where municipalities that have very well educated inhabitants might have an easer time convincing them of then necessities of environmental thinking. This is somewhat contrary to what has been said earlier on in the interviews and the question is if it is the education it self or the willingness to learn new things that control how easy it is to convince anyone of an idea. It has been mentioned that it might not be general education, but specific education on social and environmental issues that foster change.

In order for a municipality to be truly active the politicians need to be in agreement that they want to work with environmental issues and what they want to achieve with this, as well as having a prime mover or responsible person that monitors and drives the work.

There is an inherent paradox in environmental thinking; our whole economy is based on using natural resources and saving the environment often means putting and end to, or at least limiting this usage. How environmentalists discuss issues was also voiced as a problem since it is often a case of words such as STOP, Hinder, Put an end to and so forth that are used when it comes to environment contra entrepreneurship. Maybe one of the biggest problems is that the vocabulary for change needs to be altered?

On the final question, if municipality could be bad at its mandatory surveillance work but at the same time be outstanding in its environmental work and vice versa, all respondents concurred that this was very possible since the environmental work carried out is often separated from the environmental planning carried out. Further it was more than feasible that an environmentally active private sector could force the municipality to be more active and vice versa.

4.2 Answers to research question

Two research questions where posted where the researcher asked What the triggering factors enabling active municipality environmental work were, and the second question was What the barriers are to active municipality environmental work.

During the research a number of triggers and barriers have been identified. In the earlier chapters the triggers and barriers have been discussed against theories used and the researched material to date. In the final analysis of the material some definite triggers and barriers were identified and validated. In some cases a trigger also acted as a barrier depending on how you viewed the situation.

Triggers:

Prime movers were identified as potential triggers at an early stage of the research and all the material collected supports this.

Organizational structure was identified as a potential barrier, but during the research it also emerged that an organization that permitted employees and prime movers to have leeway and work under responsibility could actually act as a trigger for active environmental work.

LIP money has acted as a trigger for many municipalities. The fact that the municipalities could get help with some of their costs was a big help in convincing upper management to invest in many environmental programs over the last years.

Stakeholder pressure was seen as a big triggering factor for management and politicians alike. An interesting thing is that stakeholders also were perceived as possible barriers to change.

The threat of bad-will and the hope of good will were also mentioned as definite triggering factors.

Legislation was mentioned as one of the first reasons for any environmental work being done, and in some cases this is still true. Legislations or perceived future legislations are definitely strong triggers for change within municipalities.

Knowledge sharing emerged as a possible trigger during the research. By enlightening the people who would be affected by environmental change you potentially have a triggering factor.

Reluctance to appear to be doing a lot worse than the neighboring municipalities was also identified as a possible trigger for active environmental work.

The political agenda can be a trigger if the current trend is for inhabitants to have an environmental interest. This was an other trigger that was also voiced as a potential barrier.

Barriers:

Economy, or the perception of costs versus expenses in budgets. This is nothing new for municipalities nor for companies, there is always a reluctance to take an expense today to avoid costs in the future.

Organizational structure can work against change. This might be both on a very local level i.e. a specific branch of the municipality or for the whole organization.

Stakeholder pressure can be a large barrier to change. I.e. a large commercial employer might hinder environmental change and legislation for personal reasons.

The lack of valid comparisons between the municipalities works as a protection. With an acknowledged comparison between all Swedish municipalities there would be a lot more outside pressure to change and conform so all had approximately equal environmental activeness.

The political agenda can be a barrier. It was mentioned that the elected officials have a hard time going against voters, even if it is for the best of the environment. Their was also a feeling

that in the best case politicians thought in fiscal years when it came to making decisions and in the worst case only to what would get them reelected.

4.3 Conclusion

The research identifies a number of triggering factors that can enable active environmental work within the municipalities. The foremost ones are prime movers, influential persons weather they be politicians, civil servants or any other stakeholder as well as the organization in which they operate. Another strong trigger is interest group and their influence as well as the threat of bad will. A number of barriers are identified such as economy, organizational structure as well as stakeholder pressure being important.

It would seem as if the triggers and barriers are indeed interconnected and somewhat dependent on one and other. One such instance is LIP money, which has bridged the gap between the need to do something, and the lack of economy or organizational will to free funds for the work needed. The LIP money made it hard for decision makers to refuse projects in the beginning since they actually brought funds into the system and the municipality could bring working hours into the deal.

The work does indicate that some issues are more important than others when it comes to enabling municipalities to be active with their environmental work. The research indicates that the organizational structure and prime movers are very important, but since they were not part of the research question these ideas are covered in a discussion part of the research to indicate that they are ideas gained from working with all of the material from the research and that these ideas are not as thoroughly validated as the rest of the material.

The work did not, however, find a conclusive answer to why municipalities have done the environmental work that was outside of the mandatory. The most common answer was that it was necessary, but who decided that it was necessary?

Neither was a clear marketing advantaged found that would warrant active municipal environmental work. There was no consensus on companies nor inhabitants choosing municipalities to occupy based on their active or non active environmental work.

4.4 Discussion

During the research a number of issues have emerged that are interesting to voice as the authors speculation. One issue that came up was if the municipalize would perform better if they were being benchmarked against each other. The quick answer to that is yes, but a number of problems are connected to the notion of benchmarking municipalities as was discussed in the first chapter. Why are you doing the benchmarking in the first place? Is it to educate and share knowledge between the municipalities in order to improve performance or is it a competition where you just want to have a high score in order to appear competitive and attractive for commercial businesses or to attract more inhabitants? Should the benchmarking be done form a central agency such as the [municipalities joint organization] where you would have to agree upon a few very simple and robust questions to compare over the line. Or should the benchmarking be done on a local level in order to enhance communication and knowledge sharing on a local and deeper level? It was made quite clear during the research that nobody appreciates to be the worst performer, especially when part of the organization might be trying really hard to be environmentally active, but are lacking the necessary backup from the organization or most immediate management.

It would be beneficial to do further research on the issue of municipal benchmarking, both on a local level and a national level. The researcher believes that by doing benchmarking and chairing information on a local level many municipalities would get that necessary boost to be more active and involved with the environment and at the same time the better performers would have to contemplate what they have done, why they have done it and how to pass this knowledge on to others.

In conjunction with benchmarking all respondents did agree that environmentally active industries could trigger municipalities into being active. Would it then be beneficial to look to acknowledged business in different municipalities to see if they indeed have made a difference on the work carried out by the municipality?

The organizational structure seems to play a very important role in all municipalities either as triggering factor for active work or as a barrier to being active. In all of the municipalities that have performed well in previous benchmarking tests the organizational structure encourages holistic thinking as well as working with long-term quality instead of short-term savings. Overall strategic decisions more often than not include environmental thinking. There was also a notion that management was aligned with the fact that decisions needed to viewed from an environmental perspective just as much as from an economic one.

It would be beneficial to do further studies on what kind of organizational structure is ideal for environmental thinking and activeness for municipalities and how municipalities would go about changing into this structure. Could it be that a certain kind of benchmarking would encourage an organizational change in order to be competitive? Or could a certain reporting framework work as a catalyst for this change?

Then there is the issue of how to inform the public of the work already being carried out in the municipalities. There is substantial environmental work being done in most communities today, but municipalities are generally very bad at communication this in a way that inhabitants can associate with. The idea of putting up visual goals that all internal environmental work is measured and benchmarked towards has been mentioned as one possible way of communicating on a local level. The fact remains that as long as inhabitants of municipalities do not realize how much they get in terms of environmental protection, water usage, sewers, garbage disposal, safe electricity grids as well as parks, roads and nature for relatively small amounts of money they will not appreciate what is being done nor understand it.

How do you measure the value of the environmental work carried out in the municipality? Can you calculate the alternative costs of not having an environment or having to clean up certain parts of the environment? Could you construct a model that could measure the value of work being carried out in the different municipalities and with this benchmark them against each other and would this have any real value, and if so value to whom?

5. Recommendation

What then is important, or should be important to focus on for municipalities who want to be environmentally active? The researcher has identified a few key issues that could help municipalities in their goal for improved environmental performance.

Today there is no pressure outside of legislation to strive to be an active environmental community, yet some municipalities still work hard towards this end. Today there is no acknowledged national benchmarking for companies nor for municipalities when it comes to environmental work. There are a number of different companies offering commercial businesses ratings and benchmarking, but no overall agreed upon scheme. It is an acknowledge fact within business that companies that benchmark against top performers tend to do better. This research indicates that the same should be true for municipalities. In the begging they could start small with internal benchmarking on issues they find important. This could be a triple bottom line reporting, or just environmental reporting. After the internal benchmarking has gotten underway it would be beneficial to do benchmarking with the closest neighbors or partner municipalities in order to chare knowledge and learn from each other's ideas and mistakes. In the long run it would be ideal to have a national benchmarking run by a central organization such as the [municipalities joint organization]. It is the researcher belief that by doing benchmarking throughout the organization, a number of triggers that have been discussed earlier could be achieved. You would get <u>interest</u> by having comparison within the organization as well as outside of it. People would be <u>educated</u> on important environmental issues as well as <u>share</u> this <u>knowledge</u> at least within the organization and ultimately outside of it. The normal result of repeated benchmarking is that the organization becomes more and more streamlined something that would affect the <u>economy</u>. These issues put together would ensure that the municipality was indeed <u>active</u> in their environmental work.

During the research the municipalities who performed well in the benchmarkings that have been done have one thing in common, they all have organizations that look to the overall gains in a holistic view. Further they let employees run with ideas that are well motivated and that can be defended in an overall economic viewpoint. This indicates that a **municipality that strives to** have an organizational structure that supports prime movers and a holistic thinking will be better suited for active environmental work and a changing environment in general. The research also indicates that the organization needs incorporate the environment in the strategic thinking often by including the environmental department or a person from said department in working groups throughout the organization. By getting environmental ideas to bubble up and then trickle down through the organization they ensure that people throughout are informed and can give input and share thoughts and knowledge on the issue at hand.

The need for people to understand what the environmental issues are really about has emerged as an educational topic. Organizations, private and public, need to be able to visualize work being carried out in a way that respondents can relate to. Many times a lot of environmental work is already being carried out within the municipality, but it is being done by hard working civil servants who work in the "shadows" without any means to communicate this to more than to immediate management. Unfortunately there is often a feeling that people in the municipality take the day-to-day environmental work for granted or as a obvious thing they should get for paying taxes. It could be important for the municipality to show inhabitants what they are doing in a way that they can relate to. It would therefore be beneficial for municipalities to show and evaluate the municipal gains that the inhabitants

enjoy personally and as a whole community, due to the environmental work that is being carried out. This would also be a thing that could be benchmarked towards other municipalities to see if they are on par or need to improve, and ultimately this might become an issue that does influence where people want to live or where companies plan to locate their business.

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Interviews:

Per Göran Andersson, [Enviornmental CEO in Lund] Miljöchef Lund

Nils-Olof Carlsson, [CEO TF in Klippan] Chef Tekniska förvaltningen Klippan

Rolf Engelsson, [Environmental coordinator Lund] Miljökoordinator Lund

Monica Erlandsson, [Environmental coordinator Staffanstorp] Miljö koordinator Staffanstorp

Birgitta Johansson Stenrup, [Environmental CEO in Klippan] miljöchef Klippan

Per Karlsson, [CEO PK Invest] VD PK Invest

Mats Lindblad, [CEO Advisors] VD Advisors

Helen Nerbring Lisell [Building and environmental office Svedala] Bygg och miljökontoret Svedala

Fredrik Nilsson, [TF Jönköping] tekniska förvaltningen Jönköping

Björn Sanzen, [Enviornmental CEO in Kävlinge] miljöchef Kävlinge

Nils-Erik Wickman, [Board member of environmental newspaper Miljö Eko] styrelse ledamot MiljöEko

Petra Wilhelmsson, [Environmental office Svedal] Miljökontoret Svedala

Tove Zellman, [Reporter for Skanian newspaper Sydvenska Dagbladet] Reporter Sydsvenska dagbladet

Peter Vänster, [Works for municipalities joint organization] Kommunförbundet

Abbreviations

CERES	Coalition for Environmentally Responsible Economies
CSR	Corporate Social Responsibility
EPA	Environmental Protection Agency
EPR	Extended Producer Responsibility
ESO	[Expert group for studies in public economy] Expertgruppen för studier I offentlig ekonomi
GRI	Global Reporting Initiative
HSE	Health Safety and Environment
IIIEE	The International Institute for Industrial Environmental Economics
KISS	Keep It Short and Simple
LIP	[Local Investment money] lokala investerings pengar
OECD	Organization for Economic Co-operation and Development
SRI	Social Responsible Investment
SDS	Sydsvenka Dagbladed
TF	Tekniska Förvaltningen
TQM	Total Quality Management
UNEP	United Nations Environmental Program
WRI	World Resource Institute

Appendices

Appendix A Results, questions and answers to MiljöEko since 1997

	Klippan	Kävlinge	Lund	Staffanstorp	Svedala
ES = Ej Svarat					
1997	15	14	21	17	16
1999	26	30	44	29	34
2000 ES		22	33	25	24
2001 ES		14	36 ES		26
2002					

Frågor 1999

	Klippan	Kävlinge	Lund	Staffanstorp	Svedala
Agenda 21	2	2	6	6	6
Avfall	4	4	4	2	2
Energi	2	2	2	2	0
Transporter	2	4	4	4	2
Upphandling	8	6	10	8	8
Miljörevision	4	0	4	1	2
Miljömål	0	4	4	4	2
Miljöutbildning	2	2	2	0	2
Information	2	4	4	2	6
Diplomering	0	0	2	0	0
Miljöledningssystem	0	2	2	0	4
	26	30	44	29	34

Frågor 2000	Klippan	Kävlinge	Lund	Staffanstorp	Svedala
Agenda 21		0	0	2	2	2
Avfall		0	2	1	2	2
Energi		0	2	4	2	2
Transporter		0	4	2	4	2
Upphandling		0	4	4	4	4
Miljörevision		0	0	2	2	2
Miljömål		0	0	4	4	2
Miljöutbildning		0	2	2	0	0
Information		0	4	6	4	4
Kommunens ftg		0	2	4	0	2
Miljöledningssystem		0	2	2	1	2
ES		22	33	25	24

Frågor 2001	Klippan	Kävlinge	Lund	Staffanstorp	Svedala
Agenda 21		0	0	2	0	2
Avfall		0	0	2	0	2
Energi		0	2	4	0	4
Transporter		0	4	4	0	2
Upphandling		0	2	4	0	4
ekologiska livsmedel		0	0	0	0	2

Miljörevision	0	0	2	0	2
Miljömål	0	0	4	0	2
Miljöutbildning	0	2	2	0	0
Information	0	2	6	0	2
Kommunens ftg	0	0	4	0	2
Miljöledningssystem	0	2	2	0	2
	ES	14	36 ES		26

In the years of 2001 the questions where posted in the following way:

AGENDA 21
a) Har kommunfullmäktige antagit en lokal handlingsplan för Agenda 21?
b) Uppmuntras kommuninvånarna till minskad sopmängd genom lägre sophämtningsavgifter?

ENERGI
a) Värms några av kommunens fastigheter upp med förnyelsebar energi?
b) Köper kommunen in miljömärkt el, märkt BRA Miljöval?

TRANSPORTER
a) Drivs några av kommunens fordon på el eller förnybart bränsle (som etanol, biogas, metanol, RME, vätgas)?
b) Har kommunen en miljöanpassad resepolicy för tjänsteresor?

UPPHANDLING Ställer kommunen miljökrav vid upphandling av:
a) förbrukningsvaror
b) tjänster

EKOLOGISKA LIVSMEDEL Finns det beslut om inköp av ekologiska livsmedel enligt KRAV eller jämförbart?
a) miljörevision
b) miljöbokslut
c) miljönyckeltal i bokslutet

MILJÖMÅL Har kommunfullmäktige antagit något av följande miljömål? Om ja uppge procentsats och datum när målet ska ha nåtts
a) att minska sopmängden?
b) att minska utsläppen av koldioxid?

UTBILDNING Erbjuds anställda kontinuerlig vidareutbildning relaterad till sina arbetsuppgifter inom miljöområdet?

INFORMATION Erbjuds kommunens invånare aktuell information varje år om hur de ska minska sin miljöpåverkan genom:
a) informationsträffar/föreläsningar
b) flygblad/broschyr till varje hushåll
c) information genom lokalpressen

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KOMMUNENS FÖRETAG

a) Driver kommunen något projekt för att öka miljömedvetandet hos lokala företag?

b) Utför kommunen någon form av miljödiplomering av företag?

MILJÖLEDNING Pågår arbete för att registrera någon av kommunens anläggningar eller verksamheter enligt miljöledningssystemen EMAS eller ISO 14001?

Appendix B Results and Questions to the survey done by Sydsvenskan and Tove Zellman.

1. Har ni lokal agenda 21- plan ?
   ja/nej   0-2p

2. Har ni lägre sophämtningsavgifter vid källsortering?
   ja/nej   0-1p

3. Har ni Miljömärkt el med BRA Miljöval?
   1-33% 1p 34-66% 2p 67-100% 0-3p

4. Finns det kommunfordon som drivs på el eller förnybart bränsle?
   ja/nej 0-1p
   (Zellaman var inte nöjd med denna fråga då det inte beskriver hur många bilar det rör sig om. Malmö har tex. 50% av bilparken medan vissa kanske bara har ett ända fordon.

5. Finns det åtgärder för att uppfylla delmålen i de 15 miljömålen?
   0-5p. De som har 4 poäng har skrivit rejäla mål 60s eller mer.

6. Finns det mål för minskade avfallsmängder och koldioxid utsläpp?
   2 p på varje. Har dom mål om att minska ja nej, % sats och datum till målen samma sak gäller för sopor. 0-4p

7. Finns det miljörevision med miljöbokslut?
   3 del-frågor ger max 3p. Miljöbokslut, revision det ska vara med i bokföringen. Har det kommit med? 0-3p

8. Görs inköp av ekologiska livsmedel?
   Samma uppdelning som för miljömärkt el. 0-3p

9. Har det gjorts någon inventering av kommunens biologiska mångfalde de senaste 5 åren?
   ja/nej 0-1p

10. Har ni bildat egna kommunala naturvårdsreservat?
    ja nej 0-1p (Svår fråga enligt Zellman då ex. Skanör redan har 10 reservat och de därför inte har plats till fler.)

11. Finns det aktuell information om hur innevånarna kan arbeta för miljön? Har man info träffar? Skickar man ut info?
    0-2p

12. Finns det projekt för att öka miljömedvetandet hos lokala företag?
    ja/nej 0-1p

13. Finns det miljödiplomering av företag?
    ja/nej 0-1p

14. Finns det certifierade miljöledningsverksamheter?
    ja/nej 0-1p

15. Finns det lokala investeringsprogram LIP (Hur mycket per innevånare)?
    pengar per innevånare

Max poäng   29

Lund   25p
Svedala   18p
Kävlinge   5p
Staffanstorp   4p

Appendix C Questions sent out to municipalities.

Frågor till kommunen:

Enligt den Nationella strategin för hållbar utveckling Skr 2001/02:172 så har, eller ska Nordiska ministerrådet ha utvecklat en strategi för hållbar utveckling (Nord 2001:3) Det ska finnas mål och åtgärder för perioden 2001-2004, samt vissa långsiktiga mål fram till 2020.

Man talar om att utveckla indikatorer för att kunna värdera genomförande av strategin och också för att kontrollera hur de lokala programmen som Agenda 21 har fallit ut!

- Har ni på kommunen fått ta del av hur dessa indikatorer ser ut eller kommer att se ut?

- Har ni fått indikatorer på hur ert lokala agenda 21 arbete kommer utvärderas? Finns det specifika punkter man jämför agenda 21 arbeten på mellan kommunerna? Hur har ni engagerat kommun innevånarna i agenda 21 arbetet och hur har det fallit ut? Skulle samma process kunna användas för att höja kunskapen om det nuvarande hållbarhets programmet?

- Har ni sökt och erhållit några LIP (lokala investerings program) bidrag? Vad har dessa gått till? Hur har de tagits emot?

- Nu har LIP ersatts med Klimp (Klimat investerings programmet) som ska verka för att minska utsläppen av växthusgaser. Har ni tittat till projekt som skulle kunna få bidrag från detta programmet?

- EU har också presenterat en strategi för hur man ska förvalta naturresurser på ett ansvarsfull sätt, samt hur man ser till hotet mot folkhälsan. Dessa punkter bör vara av intresse för alla kommuner. Har ni tagit del av denna strategi och iså fall; hur anser ni att ni uppfyller strategin? Om inte, har ni planer på att börja jobba efter strategin eller börja titta på vad den skulle innebära för er?

- Man talar i rapporten (Nationella strategin för hållbar utveckling) om att en av de viktigaste uppgifterna inom samhällsplanering är att bryta sektoriseringen dvs. man måste se till helheten och inte enbart den fysiska miljön. Man måste följaktligen planera för både socialomsorg, trygghet, säkerhet, infrastruktur, näringsliv (även sysselsättning), naturresurser, boende, service och en god livsmiljö. Detta innebär att någon måste koordinera de olika enheterna (inom kommunen) så att de inte hindrar varandra. Vem inom den kommunala planeringen har idag en sådan helikopterblick och mandat att fatta svåra beslut?

- Har det gjorts någon HKB (Hälso-Konsekvens-Bedöming) över det miljöarbete som görs hos er, eller någonstans i Sverige? Det kan vara intressant att se om man gjort bedömningar på konsekvenser och effekter på folkhälsan om man skulle förändra eller ta bort vissa delar av miljöarbetet. Ex vatten, avlopp, parker etc

- Hur ställer sig Kommunen till de 30 indikatorer för sustainabilty som presenterades inför Europeiska rådets möte i Göteborg i juni 2001. "Sustainable Development Indicators för Sweden – a first set 2001" Har man försökt rapportera och mäta enligt dessa? Finns även att hittas på sidan 110-111 i Nationella strategin för hållbar utveckling Skr 2001/02:172

- Det pekas också på att det är viktigt att brygga klyftan mellan forskning och praktiskt användande för beslutsfattare och i och med detta ett allt större behov av metoder och praktiska verktyg till hjälp och stöd för konfliktavvägning i samband med beslutsprocesser.

Vilka metoder och verktyg finns tillhands för beslutsfattare inom olika positioner av kommunen?

De 30 valda indikatorerna som tagits from i Skr. 2001/02:172 sida 110-111

Nationell skrivelse för hållbar utveckling

Effektivitet

1. Energiintensitet

2. BNP per arbetad timme

3. a) Hushållsavfall, uppkommet och omhändertagande
   b) Icke-farligt industriavfall, uppkommet och omhändertagande
   c) Icke-farligt industriavfall i relation till förädlingsvärdet

4. a) Allmänt hälsotillstånd
   b) Sjukvårdskostnader

5. Andel elever som ej är behöriga till gymnasiet

Allas bidrag, delaktighet, jämlikhet och fördelning

6. a) Befolkning efter åldersgrupp i procent
   b) Befolkning efter åldersgrupp i antal

7. Andel av Sveriges befolkning och BRP som andel av BNP

8. a) Godstrafik per trafikslag
   b) Inrikes persontransporter

9. Disponibel hushållsinkomst/konsumtionsenhet

10. Kvinnors lön i procent som andel av männens

11. Valdeltagande i riksdagsvalet

12. Antal våldsbrott/Hot om våld. Andel av befolkningen

13. a) EMAS- och ISO-certifierade företag och ekoskolor
    b) Miljöcertifierad skog

14. Köp av miljömärkta varor och tjänster/total privat konsumtion

Anpassningsförmåga

15. a) Tillförsel av energi
    b) Energianvändning per sektor
    c) El för uppvärmning

16. a) Investeringar: Fasta brutto- och nettoinvesteringar i förhållande till BNP, löpande priser
    b) Investeringar: Fasta bruttoinvesteringar i förhållande till BNP, löpande priser

17. a) Nystartade företag och konkurser
    b) Nystartade företag 1999, branschfördelade

18. Utbildningsnivå efter kön

19. FoU-kostnader i förhållande till BNP

20. a) Sysselsättning
    b) Kort- och långtidsarbetslösa, andel kvinnor respektive andel män av arbetskraften

21. Ekologisk odling, betesmark, slåtteräng

Värden som förs över till kommande generationer

22. Offentlig och statlig nettoskuld i relation till BNP

23. Utgifter för hälso- och sjukvård, utbildning, socialförsäkring, och social omsorg som andel av BNP

24. Direkt inhemsk materialkonsumtion (DMC)

25. Årlig tillförsel av hälso- och/eller miljöfarliga kemikalier

26. Astma-allergier bland skolbarn

27. Andel skyddad areal i Sverige av total areal

28. Utnyttjande av strömming i Östersjön

29. Andel försvunna eller hotade arter i relation till hotbedömda arter

30. Utsläpp av koldioxid

Dessa kan jämföras med de frågor som tidigare togs upp av tidningen Miljö EKO

AGENDA 21
a) Har kommunfullmäktige antagit en lokal handlingsplan för Agenda 21?
b) Uppmuntras kommuninvånarna till minskad sopmängd genom lägre sophämtningsavgifter?

ENERGI
a) Värms några av kommunens fastigheter upp med förnyelsebar energi?
b) Köper kommunen in miljömärkt el, märkt BRA Miljöval?

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b) tjänster

EKOLOGISKA LIVSMEDEL Finns det beslut om inköp av ekologiska livsmedel enligt KRAV eller jämförbart?
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b) miljöbokslut
c) miljönyckeltal i bokslutet

MILJÖMÅL Har kommunfullmäktige antagit något av följande miljömål? Om ja uppge procentsats och datum när målet ska ha nåtts
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a) informationsträffar/föreläsningar
b) flygblad/broschyr till varje hushåll
c) information genom lokalpressen

KOMMUNENS FÖRETAG
a) Driver kommunen något projekt för att öka miljömedvetandet hos lokala företag?
b) Utför kommunen någon form av miljödiplomering av företag?

MILJÖLEDNING Pågår arbete för att registrera någon av kommunens anläggningar eller verksamheter enligt miljöledningssystemen EMAS eller ISO 14001?

Appendix D Open ended questions for municipalities

- Hur påverkar Tekniska förvaltningen eller miljöenhetens arbete och ansvarsområden Folkhälsomålen som är uppsatta? Hälsa i arbetslivet, sunda miljöer, ökade fysiska aktiviteter, säkra livsmedel etc?

- Hur påverkas kommunens och Tekniska förvaltningen eller miljöenhetens arbete av de lokala "generella" förutsättningarna som finns? I.e. befolknings mängd, ekonomi, generell utbildningsnivå i jämförelse med större kommuner som ex Malmö?

- Vilka potential finns inom regionen? Hur ska de kunna förverkligas och vilken effekt skulle detta få?

- Vad anser ni är de 5 viktigaste interna miljömålen för kommunen?

    o Varför är dessa de 5 viktigaste

- "Varför" driver kommunen ett aktivt miljö arbete?

- Vad har man gjort så här långt och vad är de främsta orsakerna till att man fokuserat på dessa aspekterna? (Vad har legat bakom förändringsprocesserna?) Vem har ansvarat för dessa processer?

- Vilka är det viktigaste beslut man fattat inom miljötänkandet för kommunen?

    o Hur har dessa beslut sen följts upp?

    o Var mål specifika eller övergripande var de knutna till speciella personers ansvarsområden?

Appendix E Additional questions to municipalities

Hej, jag skickar här en första analys av kommunernas miljöjobb samt sätter en del påståenden i slutet, jag indikerar inte om jag tycker de är rätt eller fel och vissa av dom kan eventuellt verka lite provocerande men jag ber dig ändå svara efter eget omdöme och vad du anser är rätt. Påståendena är graderade så att du kan anse dem som helt fel till helt rätt på en 10 gradig skala. Min analys är på engelska då jag skriver uppsatsen på engelska, men det går alldeles utmärkt att svara på påståendena på svenska. Du kan antingen skriva ut och fylla i för hand eller bara svara elektroniskt genom att i kommentarerna skriva det nummer du anser är rätt, med eller utan en kommentar.

- Det är sant att den generella utbildningsnivån på befolkningen inte spelar någon som hälst roll för miljöarbetet i kommunen

Helt fel   Helt rätt

1   2   3   4   5   6   7   9   10

Kommentarer:

- Det är sant att det endast är politikernas intresse för miljö som styr hur bra kommunens miljöarbete blir till slut

Helt fel   Helt rätt

1   2   3   4   5   6   7   9   10

Kommentarer:

- Det är sant att eldsjälar kan driva fram en hel kommuns miljöarbete oberoende av befattning

Helt fel   Helt rätt

1   2   3   4   5   6   7   9   10

Kommentarer:

- Det är sant att inflytelserika personer inom förvaltningen ensamma kan bromsa upp miljöarbetet inom kommunen

Helt fel   Helt rätt

1   2   3   4   5   6   7   9   10

Kommentarer:

- Det är sant att inflytelse rika personer inom förvaltningen ensamma kan driva igenom ett aktivtmiljöarbete inom kommunen

Helt fel   Helt rätt

1   2   3   4   5   6   7   9   10

Kommentarer:

- Det är sant att saker som befolkningsmängd, area fördelning av kommunen mellan åkermark, skog och vatten inte påverkar om kommunen kan utföra ett aktivtmiljöarbete

Helt fel   Helt rätt

1   2   3   4   5   6   7   9   10

Kommentarer:

- Det är sant att alla kommuner egentligen har potential att ligga i framkant för aktivt miljöarbete

Helt fel   Helt rätt

1   2   3   4   5   6   7   9   10

Kommentarer:

- Det är sant att intresseorganisationer utanför kommunen kan påverka kommunens miljöarbete

Helt fel   Helt rätt

1   2   3   4   5   6   7 9   10

Kommentarer:

- Det är sant att risken för "bad will" eller dålig publicitet påverkar kommunens miljöarbete

Helt fel   Helt rätt

1   2   3   4   5   6   7 9   10

Kommentarer:

- Det är sant att den generella kunskapsnivån inom miljötänkande har höjts internt inom kommunen sedan agenda 21 arbetet startade

Helt fel   Helt rätt

1   2   3   4   5   6   7 9   10

Kommentarer:

- Det är sant att om miljötillsynen var lag under statlig kontroll och inte kommunal, så skulle mer aktivt miljöarbete ske på lokalnivå

Helt fel   Helt rätt

1   2   3   4   5   6   7 9   10

Kommentarer:

Appendix F Overview of answers to statements for second analysis

Questions	Municipality 1	Municipality 2	Municipality 3	Municipality 4	Municipality 5
1. It is true that the general educational level of the population does not influence the municipal environmental work in any way!	[Often farmers can have more knowledge on nature than social scientist or economist. I am convinced that both parties can be influenced to lower their negative impact on the environment, but campaigns and discussion topics are influenced by the educational level or the association possibilities in their day-to-day life]			[It probably has some influence]	
POINTS	10	6	3		3

2.

It is true that it is only political will or politician's interest that governs how well the municipal environmental work is in the long run!

[The final decision is in the hands of politicians, but their opinions can be influenced by statistics, lobbying, good decision making material and so forth. One group that is a big influencing factor are the inhabitants of the municipality. The politicians are elected by the public for the public][The work is of course made easier if they have an interest for the environment, but it is possible to work around this.]

[Of course not, but positive politicians are important just as negative once since they have a great deal of influence when in power.]

POINTS   2   3   5   7

3.

It is true that prime movers can force/push through an entire municipalities environmental work regardless of their own position!

[Within limits, but with both internal and external contact networks it is totally possible. That is the good thing about municipalities; there are many channels to how you reach the politicians and to how you start an opinion.]

[Prime movers are very important as good examples, but even prime movers need support in different ways.]

POINTS   7   9   7   8

4.

It is true that influential persons within the administration can single-handedly slowdown or halt the environmental work within the municipality!

[Unfortunately there is much truth in this. They can slow it up, but not necessarily stop it.]

[As the previous answer but reversed.]

     2   9   5   8

5.

It is true that influential persons within the administration can single-handedly force/push through a active environmental program within the municipality!

[The environmental work is so big that no single person can handle it on their own. On the other hand if this person has a working group that does all the day-to-day work this person can get good material as evidence or material for decisions. The best thing is if this person can get the nonbelievers to go an environmental education since this usually turns them around.]

[Look to question above, they already have the power over the funding]

GRADE		2	9	4	9

6.

It is true that things such as number of inhabitants, area distribution of the municipalities land in farmland, forest and water does not influence if the municipality can execute active environmental work!

[The relationship between these factors and the resources available for environmental work and the competence of the people working with it are more important. With the right resources and the right competence you can have active environmental work anyware.]

[Probably not these factors that control the possibilities.]

POINTS		10	10	4	9

7.

It is true that all municipalities have the potential to be in the forefront for active environmental work!

[It is all about a serious goal and then execution and follow up on that goal. With meticulous and though through planning it is possible. It is also important with knowledge sharing.][It is of course necessary to have a political decision and this is probably where most (municipalities) get stuck. They do not get the resources to try to achieve the goals or

[On the other hand everyone cannot be in the forefront, but all have the possibility to do substantially more than today. They would probably end up saving money.]

[Yes if the will is there!]

in some cases even to plan the goals.]

POINTS		10	9	3	5

8.

It is true that interest groups outside of the municipality can influence the environmental work!

[All serious and trustworthy information is considered. The interest organizations need to find a suitable avenue of entry into the municipality, politicians, civil servants or the agenda 21 coordinator.]

[Politicians are very sensitive to local opinions especially the closer you get to an election.]

POINTS		10	10	7	10

9.

It is true that the risk for "bad will" or bad publicity influences the municipality's environmental work!

[The municipalities politicians are supposed to represent the inhabitants interests and the civil servants are supposed to service the inhabitants. It is what the inhabitants think that is important.]

[Yes, see above.]

POINTS		10	4	6	9

10.

It is true that the general educational level within environmental thinking has been raised within the municipality since the agenda 21 program started!

[The agenda 21 work method designed to draw attention. If you have successful agenda 21 projects behind you, the environmental knowledge of both the public and colleagues has increased. There are still some groups that are hard to reach, for instance teachers.]

POINTS   9   7   9   10

11.

It is true that if the mandatory surveillance was under governmental control and not municipal control, then more active environmental work would be performed on a local level!

[I have not looked upon it in this way before, but with today's economy there is a risk that that person would have to quit.]

[This is the biggest barrier for the environmental surveillance to function properly.]

[Surveillance has very little to do with "active environmental work". It is other factors that are driving or triggering for the development, even though the surveillance in it self can play a part in "bad will" for companies or to create headlines in the media and thus push active environmental work.]

POINTS   5   10   6   5